527

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GGTTTGGTAG CTATCCACTT GATGGTCAAA TTGAAAATGG GGCAAGGCCA TCAGTAAATT    4860

CACACCCTGC TCAAAAAAGG TCAGAGGGAA AAAGAGGTGC CGACCTTGGT TTTGGAAAAA    4920

GAGGTCTGGA ACCAGCCCTT CCTCCGTTAG TCCGTGCAAG AAAGTCAAAA GTTCTTGGCT    4980

GGCATCATCA AAGGCTTCCC AAGAAAGAGA CTCCTCATAA ATCTTGCCAA TCATATACGA    5040

CTTTCTCTGC TCGACAATCC TTAAAAAAAG TGGAATATCC CGAATGACAT AGTATTTTTG    5100

GCTATTGATT TGGCCGATTC TCAGAGTCCA CAAGATATGA TTGGTTCCTG CTTCCACCTG    5160

ACCCACAGCT GATAACTCAT AGGCGCATTC TGATTTTGGA GATAAAATTC GATCCAAAAA    5220

CTTGCCACCC AAGGTCACCT TGGTTTCAAC AGCCTCTTTT TCTTCATGAC CTTCTTCCAG    5280

ACTCCACAAG ATTTCCTGAC CACGCTCATC ATTTTTCAGA AAATGCTCTA GCGCTGCCAA    5340

ATGCACACAG TAGCCCCTCT TTTGAAAAAA ATCACAGGCA CAAAAAACCA AATCATCCTC    5400

TAAACTATAG CGCAGTTCTT CTTCTGCAAC GCGAGCGTAG AGCCGATTGT TCTTTTCCTT    5460

GATGATATCA ACCTTACCAG TTTCATAAAG GGCAACACCT TCGATACGAA TTTTCCCCGG    5520

AATCAATTTA GCCATATTTT CACCTTTACC TTATCTTTTT ATTATACCAT ATTTTCGCCT    5580

ATGAAAATAG CCTTCTAGGA AGACTTTTCT CCTAGAAGGC TGGATTTTTA ACGTTTGGCA    5640

AAAGTAGCCA CAATCCGCTG ACAGACTTCT TGCAACAGAG ATTTGGGCAT AGCTATATTG    5700

ATGCGGGCAT GGAGACTTCC TTCCTCTCCA AAATCCAAAC CACGGTTGAG GATAACCTTG    5760

GCTTCATTTC TCAACAACTC TTGCAATGTT TCATCAGTCA GGTCATAAGC TGAAAAGTCA    5820

AGCCAAATCA AGTAGGTACC TTGCGGTTTC ATGACCTTGA TTTTAGTCTC TTTTCCAAAT    5880

AGATCCATCA CATAATTGAT GTGGTCTTCA AAGACTTGCT TGAGTTCCTC TAGCCAATCT    5940

TTACCGTATC GATAGGCAGC TTCTGTCGCC AAATAACCCA AGCCTGAAAT TTCATGCTGA    6000

TTATTGGCCA ACAGGCGTTT CTGGAAAGCC AGTCTCAACT TAGGATTTTC AATGACTGCA    6060

TAGGAATTTT TTGTTCCAGC AATATTAAAT GTTTTAGTGG CACTGCTCAA GACGATAGCA    6120

AAATTTTTGA AGGCAGGATT GATGGTATTG AAAGACTGGT GTTTGTGACC AAAGAGGGTC    6180

AAATCTTGGT GAATCTCATC CGAAACTAAC AAAACACCGT GTTTTTGGCA GAGTTGGCCA    6240

ATCTTCTCCA ACACTTCTTT TTCCCAAACA CGTCCACCAG GATTGTGAGG GTTGCAAAGA    6300

ACATAGAGTT TAACCTCCTC TTCCACCAAA TCCTTTTCAA GTTGGTCAAA GTCAATCTCA    6360

AACAGACTAT CCTTTTCCAC TAAGGAATTA GTAATCAATC TACGATTATT CAACTTGACA    6420

CTGCGAGCAA AGGGTGGGTA GACAGGCGTG TTAATTAAAA CCGCCTCGCC TTCTTTTGTA    6480

AAGGTTTGAA TAGCTGTTGA GATGGCTGGT ACCACACCCT CGATAAAGAC AAGAGCCTCT    6540
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528

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TTGTCAAAGT TGTAACCGTA TTGTGTAGCT TCCCACTTTT GAACTTCCTT AATTAAGTCT    6600

TCACTGGCAT AGGTATAACC ATAAACCAGT TGGTCTGCGT AAGTTTGCAC GGCTTGGCGG    6660

ATTTCAGGCA AGACCACAAA GTCCATATCC GCTATCCAAG CTGGTAGAAC TTCACTATCC    6720

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TCATATTTTC CCATCTTTGT CTTATCCTTC TATGGCTTGG CGCAAATCTG CAATCAAATC    6840

TCTAGCATCC TCAATCCCAA TAGACAAACG CAAGAGGTCA TCTGTCAAAC CATAAGAATG    6900

GCGTACCTCT GCTGGAATAT CAGCATGAGT TTGAGTCGTT GGATAAGTAA TAAGACTTTC    6960

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GTCCACCACC ACTTTGGCAC CCTTAGCATG AGCCAATTTT GCTAGTTTTT CGATATCAAA    7440

TTCCAACATC AAGGGATTGG TTGGGGTTTC GATATAGAGA ACATCCACAT CCTTTTCTAA    7500

CTCGGCAATC AACTCTTCTT CTGTATTGGC ATAGGTAAAA TGGAAATGAC CTTCCTGCTC    7560

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CAAACTATAT AAAAAGGGAG TTTTTCCTGC TCCCTTTAAT AGACTATAAA ATGGTGAATC    8040

TCAAAAGACA CCTTCACTCT ATCATTTGCT CCTGCACAAA ACGAGCATAA CGCTCATGAT    8100

TTTCCAGTAG TTCCTTATGA GTTCCTGAGC CAGTGATTTT CCCCTCCTCT AAGAAGAAAA    8160

TACAATCCAC ATCTTTTACC GTTGACAAAC GATGCGCTAT AATCACAACC GTCTTCTCCT    8220

TTAGTACAGA ATAGAGGCTA CTGATAATCG CATACTCAGA ATCCGCATCA AGATTAGCAG    8280

TGGCTTCATC AAATATAAGA ATTTCAGCAT CTTTTAAGTA GGCTCTAGCT ATTTGAAGTC    8340
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529

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TTTCGTTCGC CCCCCTGACA AGAGTCGTCC GCGTTCACCA ACTTCAGTAT CTAGTCCCTC    8400

TTTCATGGAG CGAATCTCAT CACCTAGTGA TACTAAGTCT AGCACTTTCA TCAATTCATC    8460

ATCAGTTACT AAGCGATTCA AACCGAGACA AAGATTGTCA CGAATACTGC CAGATAAGAC    8520

TGCATTATTT TGTGAAACCC AAGCGATTTT ACTTCTCCAT TCTTTTAAGT TAAAATCATA    8580

TATACTTGAT TGCTCCATTA GAATATCTCC TGAAAGCGGT TTATAAAACC GCTCTAACAA    8640

ACGCACAATC GTTGATTTTC CTGATCCAGA TGGTCCAACA AAAGCAATTT TTTGCCCCTT    8700

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ATGGTTAAAA TTCAACCCTC GTCCTGATAC CGATTTTCCT CCCTCAAATT TTTCTTTAGG    8820

AACTGCAAGC AAGTTCTCCA GTGCAACTGA AGATCCCTTG CTCCTAGAAT AAACAGTTAC    8880

AAAATTAGCT ATATTACTAA TAGGATTAAG TAATTGAAAG AGGTAAATCA AAAACGAAAC    8940

CAAGGTTCCC ACAGATATAT ATCCTGCGCT GACCCGATAA CCCCCATAGG TTAGCATCAC    9000

AGCTATAGTC GCAAAGATAA ATAAGAGAGC AAACGGGGTC TCAAAAGAAG TAACCCTATC    9060

TGATTTCAGT GAATTGTTTT GTACCCTTTC AATACAATTA TCCAAAACAT CCTGTACACT    9120

TTTCTCTGCT TGGTTAGTCT TAATTAATTC ATGTTCTTGA ATCTTTTCAG TCAATTGCCC    9180

TGTTAAATTT CCTCCTGTAA ACGACGACTA TACTTTTCAC TGATATTGGA AAGGGGCAAG    9240

ATAATAAACA TCATACAAGG AAGAGTGATG AATAAAAGTA GAGAAAGATT CCAATCAAGA    9300

CTAAATAAGA CTACAATGGA ACCAAGTACC ATAACTAAAC TCAGAATAAT ATTTGGGAAA    9360

GTCGTAATTA AAAACTCACG AATGACACTC GTGTCATTGA CAATGGCAGA AGTCAACTCC    9420

CCACTTTGGC TCTTATCAAA GAAGGATTTC TCTACATAAA TCAACCCCTC TATCACTTTT    9480

TTCCTGATTT TTGCTATCTT TTTTTCACCC GATTGACTAA ACAGATAGTA ACCAATAGAA    9540

GAAAACAAGG CTTGACCAAT AAAAATCAAA AACGATTGAA ATACTTTGGA GCCTATATTT    9600

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AATTTCATAA ATACTCCTTA TAATATTTCA ACGGATAAAG TCGGGAATAA CTCAATTTGA    9780

GGATAAAATC TAATAAATCT TCCTATAACA AAACGCATAA CATCTAGGAT TTTATATACC    9840

TGATATTATG CGTTTTTAAG CACAAAGACT TCTTACACAA ACTTATCTAC AATTAGATTT    9900

TATTTGACAT GTTTTGCCAA TTCTTCTTGG GCTTTTTTAT TGGATTCTTC TTTTTCTTTC    9960

AACCATTTTT CTCTGGCTTT TGCATATTCG TCTGTTGTGA CAATCTTATC TTGTACTTTG    10020

AGGTATTTAT ATGATTCAAC CCCTTTTGTA CCGGTTAAAC CATAGGCAGC AGCAAATGGT    10080
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530

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ACGGTTCTTC TCAATGATGG TGTTCCCCCA CGCGAAACAC TTGGAAGAAC TAAAGAACTA    10140

TCAATCAACC AAGCTTGAAT ATCAGCATAT TTCTCATAAC GTTTGGCCGG ATCTTGCTCT    10200

TTATTAGCTT CTTCCAACAT TTGAGTATAG ACATCCAGTC CAACTGCCTT AGCCTTGTCA    10260

TTGGCCTCAC CAGGCTCTAG TCCAAGATTT TGCAGAAATC CTCCACTATT AGTATTAAAA    10320

ATATCGAGAT AGGTTGACGG GTCTTGATAA TCAGGTCCCC AACCGCCATG ATATAAATCA    10380

TAATCTTTCT GAGCAGCTGT TTGAGCAAAG TAGCCTGAAC TGTCAAACTC ATCTGATGTT    10440

AATTGCTGAA TGTCAATCAC TACATTATCA GAACCTAAAA CAGATTCAAT TGATTGTTTG    10500

ATAGAACTAA CTCCTTGTAT GCCTACTTTA TCTGTTACTT CCACAGTCTT ATCCAAGTGG    10560

ATTGGGAATT GAACACCCTT TGCTTCGAGT TCTTTCTTAG CTTCCGCAAA CTTAGCCTTG    10620

GCTTTCTCAG GATTGTAGTA AGGGTCTTGA CCATCCGCAA AGTTGATACC TTGCCATTCC    10680

TTACCATAGT TGACCATCTT AGAGGCTACA ACTTCACCAA AGTCTTTTCC CTTGATACTG    10740

ACAAAGTTTG GAGGAACCAC TAGGTTACGC AAAATCTTTG TTGCACCTTC TTTCCCTTCA    10800

GACTGAGCCC CATAAGATGT TCTGTCAAAA GCAAAATTGA TAGCCTGACG GAAGTTTTTA    10860

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CGAGCCGTAG TATAAGCACC AGCTGTAAAA TTACGTTCCA GTGATTCTTG GTCGCTACCA    11100

TCATAGTAGG TCAATTTCAC ATCGTCTACA AAGACATTCT TAGCATCCCA GTAATTAGGG    11160

TTTTTCTTAT ATTCAATAGC AGATTTTGAG ACAAGTGCTT TCATCAAGAA AGGTCCATTG    11220

TACAAAATAC TAGATGGATC CGCCTTCCCA AAATCATCCC CTTTTGATTT CAGGAAATCT    11280

GCATTAACAG GAAAAAGTAT CGTTGCAAGT GTTTTTGAAT TCCAGTAAAG TTCTGGTTTA    11340

ACCAAAGTAT ATTGAACCGT TTGGTCATCA AGTGCCTTGA CACCGACAGT TGAAAAGTCG    11400

CTTGTTTTAC CAGTGATATA GTCATCCAAA CCAGCAACAG AGTCCTGCAC TAGATACAAG    11460

GCTTCTGATT TTTTATCAGC TGCATATTGC AAACCTGTCA CAAAATCCTG GGCAGTTACA    11520

GGCGCATATT CTTCTCCCTC AGAAGTAAAC CACTTGGCAT CCTTACGAAG TTTGTAGGTA    11580

TAGGTCAAAC CGTCCTGAGA AACAGTCCAA TCCTCTGCTA ATGATGGAAT AATATTCCCA    11640

TATTGGTCAT TTTCTAATAA CCCGTCTACC AAATTTGCAA CAATATCGGA TGTTGCTGCG    11700

CGGTTTTCTG CTAGATAGTT CAAGCTAGAT GGATCACTTG AATAAACATA GTTGTAGGTT    11760

TTTGACGCCG TGCTAGAATT TCCACACGCG CTCAATAAAA CTCCTGTACC CAGGACAAGA    11820

CCTGCCAAGG TTAGATATTT GCTCTTAGAC TTTTTCATTT CCGG                     11864
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531

(2) INFORMATION FOR SEQ ID NO: 62:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2412 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

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TAACTGCACT AAACATAATA TAAGGAGAGA AAATGTCTGC AATAGAACGT ATTACAAAAG        60

CTGCTCACTT AATTGATATG AACGATATTA TCCGTGAAGG GAATCCTACT CTACGCGCGA       120

TTGCTGAGGA AGTCACTTTC CCCCTATCTG ACCAGGAAAT CATCCTAGGC GAAAAGATGA       180

TGCAATTCCT TAAACATTCC CAAGATCCTG TCATGGCTGA AAAAATGGGA CTCCGCGGTG       240

GTGTTGGACT GGCTGCTCCC CAGTTAGATA TCTCAAAACG CATTATCGCT GTTTTGGTAC       300

CTAATATTGT TGAAGAAGGC GAAACTCCAC AGGAAGCCTA CGATTTGGAA GCCATTATGT       360

ACAATCCAAA AATCGTCTCT CACTCTGTTC AAGATGCTGC TCTTGGCGAA GGAGAAGGTT       420

GCCTGTCTGT TGACCGTAAC GTGCCTGGCT ATGTTGTTCG CCATGCCCGC GTTACTGTTG       480

ACTACTTTGA CAAAGATGGA GAAAAACACC GTATCAAACT CAAAGGCTAC AACTCCATTG       540

TTGTTCAGCA TGAAATTGAC CACATTAACG GTATCATGTT TTACGATCGC ATCAATGAAA       600

AAGACCCATT TGCAGTTAAA GATGGTTTAC TGATTCTTGA ATAAAGAAAA TCCCGTTGCA       660

AGACGGGGTT TTGTGTTATA ATAGAGGCAT GAAAACAAAT GATATTGTCT ATGGTGTCCA       720

CGCCGTTACC GAAGCCCTCC TTGCAAATAC AGGAAACAAA CTCTACCTCC AAGAAGATCT      ·780

CCGAGGTAAG AATGTTGAGA AAGTCAAGGA ACTAGCTACA GAAAAGAAGG TGTCCATTTC       840

TTGGACATCA AAAAAATCTC TCTCTGAGAT TACTGAAGGT GCTGTTCATC AAGGTTTTGT       900

TCTACGAGTG TCTGAATTTG CCTATAGCGA GCTAGATTAC ATCCTTGCAA AAACACGCCA       960

AGAAGAAAAT CCACTTCTAT TGATTCTAGA TGGTCTAACC GATCCCCATA ATCTGGGTTC      1020

TATCTTGCGA ACAGCCGATG CGACCAATGT TTCAGGTGTC ATCATTCCCA AGCACCGTAC      1080

TGTCGGAGTA ACTCCTGTCG TTGCCAAAAC AGCCACAGGT GCTATTGAAC ACGTtCCAAT      1140

TGCCCGAGTG ACCAACCTCA GTCAAACCTT AGGATAAACT TAAGGATGAA GGTTTCTGGA      1200

CCTTTGGAAC GGATATGAAC GGTACTCCTT GCCACAAGTG GAATACAAAA GGGAAAATCG      1260

CCCTCATCAT TGGAAATGAA GGAAAAGGTA TCTCTAGCAA CATCAAAAAA CAGGTCGATG      1320

AAATGATTAC CATTCCGATG AATGGACATG TTCAAAGCCT TAATGCCAGT GTTGCTGCGG      1380
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532

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CCATTCTCAT GTACGAAGTT TTCCGAAATA GACTATAAAA AAGTTTCCAG TCATCTGATT        1440

GGAAACTTTT TTATGATTAA CTATGTTCTG TAATGAATTT ATAGGCTTCT TGACCAGCGA        1500

TAGCTCCATC TCCAACCGCT GTTGTTACTT GGCGAAGGTC TTTCAAGCGA ACATCTCCAA        1560

CTGCAAAGAT ACCGTCGACT GCAGTTTTCA TGTGGTTATC TGTCACAATC CATCCTGCCT        1620

GATCTTGGAT ATTCAATTCT TTAACAAAAT CGCTAAGAGG GTCCAAACCA ACATAGATAA        1680

AGACACCACC GAAGGCTTGT TCTGTCACTT GACCTGTTTT CACATTTTCA AATACGACTG        1740

ATTCTACTCG GTTTTCACCC TTGATTTCCC TTACTACAGA ATCCCAGATA AAGCTGATTT        1800

TTTCATTCGC AAAGGCGCGA TCTTGTAAAA CCTTTTGGGC ACGAAGTTGG TCACGACGGT        1860

GAACAATGGT AACAGTCTTA GCAAAACGAG TCAAGAAGAG GGCTTCTTCA ACAGCTGAAT        1920

CTCCACCACC AACTACCAAT AAATCTTGGT CACGGAAGAA AGCACCATCA CACACAGCAC        1980

AGTAAGAAAC ACCACGACTG TTCAGTTCTT CTTCTCCAGG CACTCCCAAA GGACGGTGTT        2040

TAGAACCAGT TGCTACGATA ACTGTACGTG TTTCATATGT TTGGTCATCA GTCATCACTT        2100

TCTTAAAATC ACCATGGCTT CGACATTTTC AACATAACCA TAAATGTGCT CAACACCAAG        2160

ATTTTCAAGT GGTTCAAACA TCTTTTCAGC CAATTCAGGT CCACTAATAT TAGCGTATCC        2220

TGGGTAATTT TCGATATCAG ATGTATTATT CATCTGACCA CCTGGCAGAC CACCTTCAAT        2280

CAAAGCTACT TTTAGATTGC TTCGAGCAGC ATACAAGGCC GCAGTCATCC cTGCAGGTCC        2340

AGCACCGATA ATAATAGTAT CGTACATATA GATTCCTTCT TTCTTGGTGT AACTATCTTT        2400

ATTCTAACTC TG                                                           2412
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(2) INFORMATION FOR SEQ ID NO: 63:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 7760 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

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CCGATTTGGT GGAATTTTTG TCTCATCATT TAGAAGGTGT TGCAAGAGCA GAGTTTACCT          60

TGGTGCTTCA TACCAAATTG GGAGAAGCCT CTGTTTTGGC AAATATTGTA GATGTAAACA         120

AGGATGAATG GATTTTAGGA ACAGTTGCTG GTGCCAATAC CTTATTGGTT ATTTGTCGAG         180

ATCAGCACGT TGCCAAACTC ATGGAAGATC GTTTGCTAGA TTTGATGAAA GATAAGTAAG         240

GTCTTGGGAG TTGCTCTCAA GACTTATTTT TGAAAAGGAG AGACAGAAAA TGGCGATAGA         300

AAAGTTATCA CCCGGCATGC AACAGTATGT GGATATTAAA AAGCAATATC CAGATGCTTT         360
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533

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TTTGCTCTTT CGGATGGGTG ATTTTTATGA ATTATTTTAT GAGGATGCGG TCAATGCTGC    420

GCAGATTCTG GAAATTTCCT TAACGAGTCG CAACAAGAAT GCCGACAATC CGATCCCTAT    480

GGCGGGTGTT CCCTATCATT CTGCCCAACA GTATATCGAT GTCTTGATTG AGCAGGGTTA   ·540

TAAGGTGGCT ATCGCAGAGC AGATGGAAGA TCCTAAACAA GCAGTTGGGG TTGTTAAACG    600

AGAGGTTGTT CAGGTCATTA CGCCAGGGAC AGTGGTCGAT AGCAGTAAGC CGGACAGTCA    660

GAATAATTTT TTGGTTTCCA TAGACCGCGA AGGCAATCAA TTTGGCCTAG CTTATATGGA    720

TTTGGTGACG GGTGACTTTT ATGTGACAGG TCTTTTGGAT TTCACGCTGG TTTGTGGGGA    780

AATCCGTAAC CTCAAGGCTC GAGAAGTGGT GTTGGGTTAT GACTTGTCTG AGGAAGAAGA    840

ACAAATCCTC AGCCGCCAGA TGAATCTGGT ACTCTCTTAT GAAAAAGAAA GCTTTGAAGA    900

CCTTCATTTA TTGGATTTGC GATTGGCAAC GGTGGAGCAA ACGGCATCTA GTAAGCTGCT    960

CCAGTATGTT CATCGGACTC AGATGAGGGA ATTGAACCAC CTCAAACCTG TTATCCGCTA   1020

CGAAATTAAG GATTTCTTGC AGATGGATTA TGCGACCAAG GCTAGTCTGG ATTTGGTTGA   1080

GAATGCTCGC TCAGGTAAGA AACAAGGCAG TCTTTTCTGG CTTTTGGATG AAACCAAAAC   1140

GGCTATGGGG ATGCGTCTCT TGCGTTCTTG GATTCATCGC CCCTTGATTG ATAAGGAACG   1200

AATCGTCCAA CGTCAAGAAG TAGTGCAGGT CTTTCTCGAC CATTTCTTTG AGCGTAGTGA   1260

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TGTGATTACA GATGGGGGAA TTATCCGGAC TGGATTTGAT GAGACTTTAG ACAAGTATCG   1560

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TGAGAAGTCA GCCAACCTCG AATACGAAAT ATTTATGCGC ATTCGTGAAG AGGTCGGCAA   1860

GTACATCCAG CGTTTACAAG CTCTAGCCCA AGGAATTGCG ACGGTTGATG TCTTACAGAG   1920

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AATTGATATC CGGAAAGGGC GCCATGCTGT CGTTGAAAAG GTTATGGGGG CTCAGACCTA   2040

TATTCCAAAT ACGATTCAGA TGGCAGAAGA TACCAGTATT CAACTGGTTA CAGGGCCAAA   2100
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534

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CATGAGTGGG AAGTCTACCT ATATGCGTCA GTTAGCCATG ACGGCGGTTA TGGCCCAGCT      2160

GGGTTCCTAT GTTCCTGCTG AAAGCGCCCA TTTACCGATT TTTGATGCGA TTTTTACCCG      2220

TATCGGAGCA GCAGATGACT TGGTTTCGGG TCAGTCAACC TTTATGGTGG AGATGATGGA      2280

GGCCAATAAT GCCATTTCGC ATGCGACCAA GAACTCTCTC ATTCTCTTTG ATGAATTGGG      2340

ACGTGGAACT GCAACTTATG ACGGGATGGC TCTTGCTCAG TCCATCATCG AATATATCCA      2400

TGAGCACATC GGAGCTAAGA CCCTCTTTGC GACCCACTAC CATGAGTTGA CTAGTCTGGA      2460

GTCTAGTTTA CAACACTTGG TCAATGTCCA CGTGGCAACT TTGGAGCAGG ATGGGCAGGT      2520

CACCTTCCTT CACAAGATTG AACCGGGACC AGCTGATAAA TCtACGGTAT CCATGTTGCC      2580

AAGATTGCTG GCTTGCCAGC AGACCTTTTA GCAAGGGCGG ATAAGATTTT GACTCAGCTA      2640

GAGAATCAAG GAACAGAGAG TCCTCCTCCC ATGAGACAAA CTAGTGCTGT CACTGAACAG      2700

ATTTCACTCT TTGATAGGGC AGAAGAGCAT CCTATCCTAG CAGAATTAGC TAAACTGGAT      2760

GTGTATAATA TGACACCTAT GCAGGTTATG AATGTCTTAG TAGAGTTAAA ACAGAAACTA      2820

TAAAACCAAG ACTCACTAGT TAATCTAGCT GTATCAAGGA GACTTCTTTG ACAATTCTCC      2880

ACTTTTTTGC TAGAATAACA TCACACAAAC AGAATGAAAA GGAGCTGACG CATTGTCGCT      2940

CCCTTTTGTC TATTTTTTAA GGAGAAAGTA TGCTGATTCA GAAAATAAAA ACCTACAAGT      3000

GGCAGGCCCT GGCTTCGCTC CTGATGACAG GCTTGATGGT TGCTAGTTCA CTTCTGCAAC      3060

CGCCGTTATCT GCAGGAAGTC TTAGGCGCCC TCCTTACTGG GAAATATGAA GCTATTTATA      3120

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TTGTCCTCGC AGCCTATATT GCCCAAGGAG TTTCATCCGA CCTTCGGGAG GATGCCTTCC      3240

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CTCTGTGGTG GGTGATTGTT CTCATGGTAG TCTTGATTTT TGGTTTGACT GCTGTCATGA      3480

TGGGAATGAT GGGGCCTCGT TTTGCCAAGT TTCAAACCCT TCTTGAGCGC ATCAATGCCA      3540

TTGCCAAGGA AAATTTACGT GGCGTTCGTG TGGTCAAGTC CTTTGTCCAA GAAAAAGAGC      3600

AATTTGCTAA GTTTACAGAG GTCTCAGACG AGCTTCTTGG TCAAAACCTT TACATTGGTT      3660

ATGCCTTTTC AGTAGTGGAA CCCTTTATGA TGTTGGTTGG TTACGGGGCG GTCTTCCTCT      3720

CTATTTGGCT GGTCGCGGGA ATGGTTCAGT CGGATCCGTC TGTTGTTGGT TCCATCGCTT      3780

CTTTTGTTAA TTACCTAAGC CAGATTATCT TTACCATTGT TATGGTTGGA TTTTTGGGAA      3840

ATTCTGTCAG CCGTGCCATG ATTTCCATGC GTCGTATTCG AGAAATTCTT GACGCAGAGC      3900
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535

CAGCTATGAC CTTCAAGGAT ATCCCAGATG AAGAGTTGGT TGGAAGTCTT AGCTTTGAAA   3960

ATGTGACCTT TACCTATCCA ATGGACAAGG AACCGATGCT GAAAGATGTG AGCTTTACTA   4020

TTGAACCTGG TCAAATGGTT GGTGTAGTTG GAGCGACTGG TGCAGGAAAG TCAACCTTGG   4080

CTCAATTGAT TCCACGTCTC TTTGATCCAC AGGACGGGGC CATTAAAATC GGTGGCAAGG   4140

ATATTCGAGA AGTGAGTGAA GGAACCCTGC GTAAAACAGT TTCCATCGTT CTCCAACGTG   4200

CCATTCTTTT TAGTGGAACG ATTGCAGATA ACTTGAGACA GGGGAAGGGG AATGCTACTC   4260

TATTTGAAAT GGAGCGCGCA GCCAATATTG CCCAGGCTAG TGAATTCATT CATCGTATGG   4320

AGAAAACCTT TGAAAGTCCA GTTGAAGAAC GGGGAACCAA TTTCTCTGGT GGACAAAAAC   4380

AAAGGATGTC GATTGCGCGT GGGATTGTCA GCAATCCACG TATTCTGATT TTTGATGATT   4440

CGACCTCAGC CTTGGATGCC AAATCAGAGC GCTTGGTGCA AGAAGCTTTG AATAAGGACT   4500

TGAAGGGGAC GACAACCATT ATTATTGCTC AAAAAAATTAG CTCGGTTGTC CATGCAGACA   4560

AGATCTTGGT TCTAAATCAA GGACGATTGA TTGGTCAAGG TACGCATGCA GACTTGGTTG   4620

CCAACAATGC CGTTTACCGT GAAATCTATG AAACACAGAA ATGAAAGACA AACTATAAGA   4680

AAAGTCAATA GTTTTATCTA AACTATTTCT TATTTCAATT TGATGATTTG GCGATGATTT   4740

TAGAGCACGG CAAAAAGCCC TTGAAAAAGT CCATTTTTTC AAAGGTAATC CTGTGTTAAT   4800

TTCAGAAATT ACATCACTTT TTGTTCGTCA AATGGCAGCT CTTTTTTTAG GATATAAAAC   4860

AGGGTTCGGA TAAGTTTTTT TGCAAGGTGG ATGATGGCTA CATTGTAATG TTTTCCTTGT   4920

TCTAATTTAG TCTTAAGATA GGCCTTAAAA GCAGGCGAAA AGCGAGGGCA TGCTTTGGCA   4980

GCTTGTATGA GTACCTACCG CAGATGAGGG GAACTCCGTT TGACCATTCT TCCTGCTAAA   5040

TCAATCTGAT CTGACTGATA AATAGAAGAA TCCAGTCCAG CGAAAGCTTG TAATTGAGCA   5100

GGATTATCAA AGGCATGAAT ATTTCGAATC TCAGCTAAAA TGACCGCCCC TAAACGATCC   5160

CCAATCCCAG TAACCGTCGT GATGACCGAG TTGAACTCAG CCATCAAGTC ATTGACACAT   5220

GTTTCCGCCT TGTCAATGAG CCTCTTGTAA TGTTTGATGT TTTCATTACA CGAGATAAAA   5280

CGTCTATGCG TTATCAAACT CATTACCAAT TAAAACAAAA AGCTGTGGTT AGATCCTTTC   5340

GGAAATTGTC AAGCGATTGG AGGAAATGAA CTAATCCACA GCGGCTTATT CCAAGTATAC   5400

CACTTGGGCT TTGGCAGTAG CTAACTGCGC TAAATATAAT ATAAGGAGGA GTAAAATGAA   5460

GACAGTTCAA TTTTTTTGGC ATTATTTTAA GGTCTACAAG TTCTCATTTG TAGTTGTCAT   5520

CCTGATGATT GTTCTGGCGA CTTTTGCCCA AGCCCTCTTT CCAGTCTTTT CTGGACAAGC   5580

GGTGACGCAG CTAGCCAATT TAGTTCAAGC TTATCAAAAT GGCAATCCAG AACTTGTATG   5640

536

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GCAAAGCCTA TCAGGAATCA TGGTCAATCT TGGCCTGCTG GTTTTGGTTC TATTTATCTC     5700

TAGTGTAATA TACATGTGTC TCATGACGCG CGTGATTGCA GAATCGACCA ACGAGATGCG     5760

CAAAGGCCTC TTTGGTAAGC TTGCTCAGTT GACGGTTTCT TTCTTTGACC GTCGACAAGA     5820

TGGCGATATC CTGTCTCATT TTACCAGTGA TTTGGATAAT ATCCTCCAAG CCTTTAACGA     5880

AAGCTTGATT CAGGTCATGA GCAATATTGT TTTATACATT GGTCTGATTC TTGTCATGTT     5940

TTCGAGAAAT GTGACGCTGG CTCTCATCAC CATTGCCAGC ACCCCATTGG CTTTCCTTAT     6000

GCTGATTTTC ATCGTGAAAA TGGCACGCAA ATACACCAAC CTCCAGCAGA AAGAGGTAGG     6060

GAAGCTCAAC GCCTATATGG ATGAGAGCAT CTCAGGCCAA AAAGCCGTGA TTGTGCAAGG     6120

AATTCAAGAG GATATGATGG CAGGATTTCT TGAACAAAAT GAGCGCGTGC GCAAGGCAAC     6180

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AACAAGTACA GCCCTAGGTT TGATTGTTAT GTTTGCACAA TTTTCACAGC AGTACTACCA     6360

GCCTATTATC CAAGTTGCAG CGAGTTGGGG AAGCCTTCAG TTGGCCTTTA CTGGAGCTGA     6420

ACGAATTCAG GAAATGTTTG ATGCAGAGGA GGAAATCCGA CCTGAAAAGG CTCCAACCTT     6480

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GCCGACAGGT TCAGGAAAAA CGACTATTAT GAACCTCATC AATCGCTTTT ATGATGTTGA     6660

TGCTGGTGGT ATTTATTTTG ATGGTAAAGA CATTCGTGGC TATGACTTAG ATAGTCTTAG     6720

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TATCCGATTT GGTGTGCCAG ATGCTAGTCA GGAAATGGTT GAGGTAGCAG CAAAAGCAAC     6840

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CCAGAGCATC TTTTCAACAG GGCAGAAGCA ATTGATTTCA ATCGCTCGAA CCCTGATGAC     6960

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CAAGATTCAG CATGCCATGG AGGTGGTTGT AGCAGGTAGA ACTAGTTTCG TCATTGCCCA     7080

CCGCTTGAAA ACCATTCTCA ATGCAGATCA GATTATTGTC CTTAAAGATG GAGAAGTCAT     7140

TGAACGTGGT AACCACCATG AACTTTTGAA GCTAGGTGGC TTTTATTCAG AACTCTATCA     7200

CAATCAATTT GTTTTCGAAT AAGAAAGAAG TTGTCCTATG TGGGCAGCTT TTTCTTGTCC     7260

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TATGATAGGA CTATCGTTAG CATTCGAAAG GAGAGGCATC ATGGCTAGAA CGGTTGTAGG     7380

AGTTGCTGCA AATCTATGTC CCGTAGACGC AGAAGGCAAA ATCATTCATT CATCTGTATC     7440
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537

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TTGTAGATTC GCAGAGATCA TTCGTCAAGT CGGTGGTCTC CCTTTAGTCA TTCCTGTTGG     7500

TGATGAGTCA GTTGTACGTG ATTATGTGGA AATGATTGAC AAACTCATTT TGACAGGAGG     7560

CCAAAATGTT CATCCTCAGT TTTATGGAGA GAAAAAGACC GTCGAGAGCG ATGATTACAA     7620

TCTGGTCCGT GACGAATTTG AATTGGCACT CTTGAAGGAA GCGCTTCGTC AGAATAAACC     7680

AATTATGGCA ATCTGTCGCG GTGTCCAACT TGTCAATGTT GCCTTTGGTG GAACCCTCAA     7740

TCAAGAAATC GAAGGTCAGG                                                 7760
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(2) INFORMATION FOR SEQ ID NO: 64:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2723 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

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GAGGTTTTAA TTCACTTACC TCTsCCGTAT CTTTATTTAA AATGAATTCT TTTACGGTTG       60

TATTTCTTGC AAAATCTTTT ACAACAATCT TAATGTTTAG TGTCTTGTCT ATTATTTGTT      120

TAATATCATT AAATGATGTA TATTCTTTTC CATTTATATA AATATGTTGT TCTTGAATCT      180

CACCATCGAA TCCATTATTT CTTTTATCAT TGATGTTAAA GACTACAGAT TTTCCATCAG      240

CATATTCGAT ACTAGTATTT CCCTTAGGAT CAATGTTTAC TTCGGGTTTA ACATTATCAT      300

ATAAAAACTG ATAGTGGACT CCAACTGCTT TAGCATTCAA ATCGCTATAG CCAGTTTGAA      360

GATAAACATT TCCATCCATA TCTGTTACCT TATCTGGAAA TCCGTTTGCT TTATAGTCTT      420

TCATTCCCCA GTCCATGATG TCACCGTCTT TAACATTCAG CTTAATATTA AAATCTCTAG      480

TGTTATCAAT GTGTAAATCT CCGTAGATTA AATAATTATC TACAACCGAT TCATTAACTC      540

TCAATTCCCA GTTAAAACCA CCCTTATCAG AAATCTTACC TCTTAAATAA AATTCTGGAT      600

TTCGTACATA AATTTTATTA GATTTAGATG GATTAAAGTA GTTCTTATCC ATTGAAAGGT      660

TTACTGGTTT GGTATCAATA AATAACATGG AGCCATCTTC TTTTATAGCT TCTACATTGA      720

ACTTATCCTC TCCAGTGTAT TCTTTATCAT CCTTACCAAA TAATACAAGT TTAGAAGAAT      780

CTGTCACAAG ATTTCCGTCT TTATCGATAG CTTCCCCTTT ATCGTTCATT TTAAATGTAA      840

ACACTTGATA CCTTATAATG TTAAAGCCGT CCAAAGCCGA CATTAATACA GATTGGGTAC      900

TTCTTCCATC TTCAACATTT CTACTATCAG CATAAATTGT TGTTTCTGAA AGGGCTCTTA      960

GATTAGGATT GGCCTTTTGT ATTTTTGCTA TATCTTCCTT GCTATAGACT CCATTTCCTT     1020
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538

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CTAACATATC CGTTTTTCCA GGATTATAGG TAGTCACTTT TAGTGCATAG CCTTTTCTTA      1080

GAATGATATT ATCCTTTAAC AGATATTGTT GTTTTTCTGA ATCAGAATAG ATTTTACCAG      1140

ATTCCATTTT AGTTAAATTG TCTGGTTTGT TTTTTGAAAG ATCTCCTTCC CCTAATTCTA      1200

TGACATTCCC ATAACTTGAT ACATAGGGAT ATTCTGATTT AGTTTCCTTA ATTTTTTCAG      1260

GCATTCTAAT TTTAATTTCA GCTTTTTTCT GATCATTATC TTTAACAAAT AATCTCATAT      1320

CTCCTGCAAA AGCTAATCCA TCCACAATAT CATTAATATT AGCGTATAGA TCAAATGTCA      1380

TCGTTTTTGA GTGGAAATCA TACTTGGTCG CTTTGATTTC TATAGATTTA TAGTTATTCC      1440

CATAATATAC CTTGGCATTT TTAGAAACAT TACTTATCTT TCCAAGAATT TCAAAGTGTC      1500

CATCTTTAGA CGGACTTAGA ACACCATAAA TTTTTGATTT GATTTCGTCA AGTTTCTCAG      1560

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TATAATCGTA TTCCTCCATT CTCTTACCAG TTTCACTTGT AAAATCATCA ACTTCTCTAA      1680

ATTTCTTTTT AATGAGTTTC TTTAAGTCTT TATTTTCAAA GTCTCTAATT GTTGAAATAT      1740

TTCTATCAAT AGTAAAACTA GATTTTTCTT TAATAGACTC TTCATTTTCT TGATGATGAT      1800

GTTCTACCCC AGTTGTATCT TTTTTTAGAC TACCCTCTTT TCCATTTCCT AAATTTTTAA      1860

ATTTAGATTC TGCAATCTCG CCAAGCTTTT GATATTTAGA TGAATCTTGA TCAGGATCTA      1920

CTAGATAATA GGAAATCATC CCCTTTTCAT CAGCCTGATT AGCAAATTTA ATTCTATGAA      1980

TCTTTGTGAA ATTGCTAGAA CCATCTAATG CAATGACTTC AATGATTTTT CCCCTTAAAT      2040

CTCCCGCACC TTTAATTTCA TAAATGGTAT TTCCGTCTTT ATCAAGTTTT CTATTTCTTC      2100

CTTGACCCTC ACCTGCGTAA GTTACTTCAA GATTTTTTTC AACCTCTCCA TCTTCATTAA      2160

CAAGAGCGGC GCCAGCATAC CAAACTTCGT TCGCAATCTC GTCAAATTTT TCAGGATGTT      2220

CTTTTTGATC TCTCGCAAAT AGCGTTTCAT TCTTATACTG ATCTTTTACC TTATGATAAG      2280

TATCCTTTGT AATCAACTTA ATTTTTTCAG GATTTGAAAA ATCAACCGAA ACAATCTTAG      2340

GGGCGGTGTT ATCAATTTTT ACAGGAATAT AGGAAACCTG CCATGGGTAA TCTTTAGTTA      2400

ATCTATATTT AAATTTATAG AAATATTGAC CTTCCGCAAT CGGTTCAAAT TGACCTCTTA      2460

TCTTAGTAGC AGGATCTTGA TTATCCTTAC TTTCTGGTGC ATTTTCTTCT CTACCTCTAG      2520

GATTATAGAT GAGTCCATCC CACTTCAAGT CACCCCAAAC TTTTAGTTTA GATGATTTGA      2580

TTCCCTTTGC ATCATTGCTT TTAGAATTTA AAATTCCTCT AATAAAGTGT TCTCTCGAAA      2640

TGACTTTTAA GTCTCTTTGA TTTTCTCCCT CTTTATTTGT ATTTACTATT GAAATCAATC      2700

CTTCTTCTGC ACTTCTTAAT ACA                                              2723
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(2) INFORMATION FOR SEQ ID NO: 65:

539

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 11831 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

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AAAAAAGTGG GAATGACTCA AATCTTCACT GAAGCTGGCG AATTGATCCC TGTAACAGTT          60

ATTGAAGCAA CTCCAAACGT TGTTCTTCAA GTTAAAACTG TTGAAACAGA CGGATACAAC         120

GCTATCCAAG TTGGTTTCGA TGACAAACGC GAAGTATTGA GCAACAAACC TGCTAAAGGA         180

CATGTAGCGA AAGCTAACAC GGCTCCTAAG CGCTTCATTC GTGAATTCAA AAACGTTGAA         240

GGCTTGGAAG TTGGTGCTGA AATTACAGTT GAAACATTCG CAGCTGGAGA CGTTGTTGAC         300

GTAACGGGTA CTTCTAAAGG TAAAGGTTTC CAAGGTGTTA TCAAACGCCA CGGACAATCA         360

CGTGGACCAA TGGCTCACGG TTCTCGTTAC CACCGTCGTC CAGGTTCTAT GGGGCCTGTT         420

GCACCTAACC GCGTATTCAA AGGTAAAAAC CTTGCAGGAC GTATGGGTGG CGACCGCGTA         480

ACAATTCAAA ACCTTGAAGT TGTACAAGTT GTTCCAGAAA AGAACGTTAT CCTTATCAAA         540

GGTAACGTAC CAGGTGCTAA GAAATCTCTT ATCACTATCA AATCAGCAGT TAAAGCTGGT         600

AAATAATAAA GAAAGGGGAA ATCAGTCACA ATGGCAAACG TAACATTATT TGACCAAACT         660

GGTAAAGAAG CTGGCCAAGT TGTTCTTAGC GATGCAGTAT TTGGTATCGA ACCAAATGAA         720

TCAGTTGTGT TTGATGTAAT CATCAGCCAA CGCGCAAGCC TTCGTCAAGG AACACACGCT         780

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GGACGTGCTC GTCAAGGTTC TATCCGCTCA CCACAATGGC GTGGTGGTGG TGTTGTCTTC         900

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CCAAACGTGA AAGTTGCAAC TGCTACAACT GCAAGTGTTC TTGACATCGC AAATAGCGAC        1200

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TGTATGATGT TATCAAAAAA CCTGTCATCA CTGAAAGCTC AATGGCTCAA CTTGAAGCAG        1320

GAAAATATGT ATTTGAAGTT GACACTCGTG CACACAAACT TTTGATCAAG CAAGCTGTTG        1380

AAGCTGCTTT CGAAGGTGTT AAAGTTGCCA ATGTTAACAC AATCAACGTA AAACCAAAAG        1440
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540

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AAATATCGTG GGAATTCGTG TTTATAAACC AACAACAAAC GGTCGCCGTA ATATGACTTC     1620

TTTGGATTTC GCTGAAATCA CAACAAGCAC TCCTGAAAAA TCATTGCTTG TTGCATTGAA     1680

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CAAACGTTTC TACCGTTTGG TTGACTTCAA ACGTAATAAA GACAACGTTG AAGCAGTTGT     1800

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AGGTCCAGAA GCAGATATCA AAGTCGGAAA CGCTCTTCCA CTTGCTAACA TCCCAGTTGG     1980

TACTTTGATT CACAACATCG AGTTGAAACC AGGTCGTGGT GGTGAATTGG TACGTGCTGC     2040

TGGTGCATCT GCTCAAGTAT TGGGTTCTGA AGGTAAATAT GTTCTTGTTC GTCTTCAATC     2100

AGGTGAAGTT CGTATGATTC TTGGAACTTG CCGTGCTACA GTTGGTGTTG TCGGAAACGA     2160

ACAACATGGA CTTGTAAACC TTGGTAAAGC AGGACGTAGC CGTTGGAAAG GTATCCGCCC     2220

AACAGTTCGT GGTTCTGTAA TGAACCCTAA CGATCACCCA CACGGTGGTG GTGAAGGTAA     2280

AGCACCAGTT GGTCGTAAAG CACCATCTAC TCCATGGGGC AAACCTGCTC TTGGTCTTAA     2340

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ATATTAAACT AGTCGCTTAA GCAACTAGTA AATCCGCCAG CTCGGTAGCG CTCCATAGGA     2460

GTGCAAGCCG CTGTGGTACA ACATTTAAAG GAGAAAATAT AAAAATGGGA CGCAGTCTTA     2520

AAAAAGGACC TTTCGTCGAT GAGCATTTGA TGAAAAAAGT TGAAGCTCAA GCTAACGACG     2580

AAAAGAAAAA AGTTATTAAA ACTTGGTCAC GTCGTTCAAC GATCTTCCCA AGTTTCATTG     2640

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TGGTAGGCCA CAAACTTGGT GAATTTGCAC CAACTCGTAC TTACAAAGGT CACGCTGCAG     2760

ACGACAAGAA AACACGTAGA AAATAAGGAG AACATAAATG GCAGAAATTA CTTCAGCTAA     2820

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TTTCCGTCCA CGTGCGAAAG GTTCAGCTTC ACCAATCAAC AAACGTACAG CTCACATCAC     3120

TGTAGCTGTT GCAGAAAAAT AAGGAGGTAA AATCGTGGGT CAAAAAGTAC ATCCAATTGG     3180

TATGCGTGTC GGCATCATCC GTGATTGGGA TGCCAAATGG TATGCTGAAA AGAATACGC      3240
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541

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GGATTACCTT CATGAAGATC TTGCAATCCG TAAATTCGTT CAAAAAGAAC TTGCTGACGC   3300

AGCAGTTTCA ACTATTGAAA TCGAACGCGC AGTAAACAAA GTTAACGTTT CACTTCACAC   3360

TGCTAAACCA GGTATGGTTA TCGGTAAAGG TGGTGCTAAC GTTGATGCaC TCCGTGCAAA   3420

ACTTAACAAA TTGACTGGAA AACAAGTACA CATCAACATC ATCGAAATCA AACAACCTGA   3480

TTTGGATGCT CACCTTGTAG GTGAAGGAAT TGCTCGTCAA TTGGAGCAAC GTGTTGCTTT   3540

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542

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ACAACTGCTA ACACTGACGA AGAGTCACGT GCATTGCTTA CAGGCCTTGG AATGCCTTTT    6060

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543

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GGGGTTGGTT ACCGTGCACA GCTTCAAGGA TCTAAACTTG TTTTGGCTGT TGGTAAATCT    7560

CATCCAGACG AAGTTGAAGC TCCAGAAGGA ATTACTTTTG AACTTCCAAA CCCAACAACA    7620

ATCGTTGTTA GCGGAATTTC AAAAGAAGTA GTTGGTCAAA CAGCTGCTTA CGTACGTAGC    7680

CTTCGTTCAC CAGAACCATA TAAAGGTAAA GGTATCCGTT ACGTTGGTGA ATTCGTTCGC    7740

CGTAAAGAAG GTAAAACAGG TAAATAATGT TGAGTGGTTG ATCATCAACC ACCAACCTAT    7800

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TGATTGATGA CGTAGCGGGT GTAACGCTCG CAAGTGCTTC AACTCTTGAT AAAGAAGTTT    8040

CAAAAGGAAC TAAAACTGAA CAAGCCGTTG CTGTCGGTAA ACTCGTTGCA GAACGTGCAA    8100

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GAAAATGGCA TTTAAAGACA ATGCAGTTGA ATTAGAAGAA CGCGTAGTTG CTGTCAACCG    8280

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TGACCACAAT GGTCGCGTAG GATTTGGTAC TGGTAAAGCT CAAGAAGTTC CAGAAGCAAT    8400

CCGTAAAGCA GTAGATGATG CTAAGAAAAA CTTGATCGAA GTTCCTATGG TTGGAACAAC    8460

AATCCCACAC GAAGTTCTTT CAGAATTCGG TGGAGCTAAA GTATTGTTGA AACCTGCTGT    8520
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AGAAGGTTCT GGAGTTGCCG CTGGTGGTGC AGTTCGTGCC GTTGTGGAAT TGGCAGGTGT      8580

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AGGTTGCACA AGGTGCTCCA TCTAGCTCTT ACCTTCCGTT AAAAGTAAAC CCTGCTGGAG      10320
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TTTTAGCAGG G                                                        11831
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(2) INFORMATION FOR SEQ ID NO: 66:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10726 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double

546
(D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

CCCGGCATTT GAAAGCTATT CGTGAAGGAT TTATGATGGC AATGCCTTTG ATTTTAGTCG   60

GCTCTTTATT TCTTATTCTA ATCAGTTGGC CTCAAGAGGC TTTTACAAAT TGGCTGAATA   120

GTGTTGGATT GCTAAGTATC TTGACAACTA TGAATCAGTC AACAGTAGCG ATTATCTCCT   180

TGGTCGCTTG TTTCGGTATT GCCTACAGGT TGTCGGAAGG ATATGGTACA GATGGTCCGT   240

CGGCAGGGAT CATAGCCTTA TCCAGTTTTG TATTGATGGC ACCTCGTTTT TCGAGTATGG   300

TTTATGATAA AAATGGGGAG CAGGTCAAGC AGTTATTTCG CGGCGCAATA CCATTTTCTA   360

GCCTGAATGC ATCTTCTTTG TTTATGGCGA TTACTATTGG ATTGGTTACA GCAGAGATTT   420

ATCGTATGTT TATCCAGCGC GGAATTACGA TAAAAATGCC AAGTGGTGTC CCAGATGTAG   480

TAAGTAAATC ATTTTCAGCT CTTTTATCTG GTTTTACTAC TTTTGTTTTG TGGGCTTTGG   540

TCTTAAAAGG TCTTGAAGCG GCAGGAGTTG CAGGAGGTCT CAACGGACTC CTAGGTGCAA   600

TTGTTGGAAC ACCGCTTAAG TTAATTGCAG GAACGCTTCC AGGTATGATT CTATGTGTTA   660

TTGTAAACTC ATTCTTTTGG TTCTGTGGAG TTAATGGGGG ACAAGTTTTA AATGCTTTTG   720

TAGACCCAGT TTGGTTACAA TTTACTACAG AAAACCAAGA AGCTGTGGCT GCAGGACAAA   780

CACTCCAACA CATTATTACA TTACCGTTTA AAGATTTATT TGTATTTATT GGTGGCGGTG   840

GAGCGACTAT TGGTCTTGCG ATTTGTCTCT TCCTATTTAG TAAGAGTCGT GCGAATAAAA   900

CATTAGGTAA GCTAGCTATT ATACCGTCTA TTTTTAATAT CAATACAGCT ATTCTATTTA   960

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ATGCCTTGAT TACCTATGTA TCAATGGCTG TAGGATTAGT ACCCTATACA ACAGGTGTAA   1080

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GAGGAGGAAG AAAGATGAAA TCAAAAGAAG AAATAAATAT GCTTGGTTTT ACAATTGTCG    3360
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CATTTTCTTG GCTAGAACTG CTGCAATCAT GTTGACTTCA TCGTGCTCAG TCAGGGCGAT      9540

AAAGATATCA CAATCTTGGA CGCTGGCTTG CTCAAGAATG GCAAAATCGG CCCCGTTACC      9600

AAGGATACCA ATGATATCAA AGCGACTGAC AATATGATTG AGAACAGCTT CGTCTTGCTC      9660

AATCAGCAAA ACATCATGCT TTTCTGCAAC CAAGGAGCGA CAGAGGGCAA AACCAACTTT      9720

TCCCCCTCCG ACAAGGATAA TTTTCATAAT AAAACCTACT TTTTCATGAT GTAACTATCA      9780

TACCCTTTTT CAAGAAAAAA TGCACCTACT AGCTAATAAC AAGAGTTTTT AGTGAAAATT      9840

CGCTATAAGG TAAAACTATA CCCTAACCAA TTGAAATAGC TATTAGCGAC TTTCTCTGAA      9900

ATATGGTATG ATAAAGGATA TACAAGGAGA TAAAATGAAT AATAATTTAC TGGTATTACA      9960

ATCACACTTT GGTCTGGTTG ATGGTGCGGT ATCGGCTATG ATTGGAGTGG CTTTAGAAGA     10020

GTCTCCAACC TTAAAAATAC ATCACTTGAC GCACGATATC ACGCCTTATA ATATTTTTGA     10080

GGGGAGCTAT CGTCTCTTTC AGACGGTGGA TTACTGGCCT GAGGGAACGA CGTTTGTATC     10140

GGTTGTCGAT CCAGGTGTCG GTTCGAAACG TAAGAGTGTA GTTGCCAAGA CTGCAAAAAA     10200

TCAATACATT GTCACGCCAG ATAATGGGAC GCTTTCCTTT ATCAAGAAAC ACGTTGGCAT     10260

TGTAGCCATT CGTGAGATTT CTGAGGTGGC CAATAGGCGT CAAAACACAG AGCATTCTTA     10320

TACCTTCCAC GGTCGTGATG TCTATGCCTA TACTGGTGCT AAACTGGCCA GTGGTCACAT     10380

TACTTTTGAG GAAGTAGGGC CAGAGCTCAG TGTGGAACAG ATTGTAGAGC TTCCAGTCGT     10440
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552

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AGCGACCATC ATAGAAGATC ATCTGGTGAA GGGAGCCATT GATATTCTGG ATGTGCGTTT      10500

CGGTTCGCTT TGGACCTCTA TCACACGGGA AGAATTTTAC AAGCTGGAAC CAGAATTTGG      10560

TGATCGTTTT GAAGTGACCA TCTATCATGC TGATATGCTG GTCTATCAAA ATCAGGTTGT      10620

CTATGGCAAA TCATTTGCAG ATGTGAGAAT TGGGCAACCs ATcTTTACrc TCAGCaTCTt      10680

CGATTAGCTG GGCAATTCGT TCTAGTTGGA TTTCGTCAAT CAAGGT                     10726
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(2) INFORMATION FOR SEQ ID NO: 67:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 7163 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

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TTATCTTTAA CGATATCAAT CAAGATCTGG TCAATAAAGG GATTGGGGCT TATCGTGAAG        60

TTGGCATCCA AGCCCATGGA TATGTCTGTG ACGTGACAGA CGAGGACGGT ATCCAAGCCA       120

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TTATCCGCCG AGTTCCAATG TGCGAAATGA GCGCCGCTGA TTTCCGTAAG GTCATCGATA       240

TTGACTTAAA CGCACCATTT ATCGTTTCAA AGGCAGTTAT TCCTTCTATG ATAAAGAAAG       300

GGCATGGAAA GATTATCAAT ATTTGTTCGA TGATGAGCGA ACTGGGACGT GAAACAGTTA       360

GCGCTTATGC TGCTGCTAAA GGGGGCTTGA AAATGTTGAC CCGCAACATT GCGTCTGAAT       420

ACGGTGGAGC CAATATCCAA TGTAACGGAA TTGGACCGGG TTATATTGCC ACTCCTCAAA       480

CAGCACCTCT TCGTGAATTG CAAGAAGATG GTTCTCGCCA CCCATTTGAC CAGTTCATCA       540

TTGCAAAAAC ACCTGCTGCA CGTTGGGGAA ATACTGAAGA TTTGATGGGC CCTGCTGTCT       600

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CATTAATCAA TGAAAATAGT CAAGCTAGCA AGAATCACAT TATTTACGAT AGTCTAAAAG       780

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AAAGTCAATT AACTTATGTG CAGAACGGAC TAATGGCTGC CATCCTTTTA AATACAAAGG       900

CAGTTGACTT TGTTGTTACC GGCTGTGGTA CGGGTGTAGG GGCTATGCTT GCTTTAAACA       960

GCTTCCCTGG TGTTGTCTGT GGTCTAGCAG TGGACCCAAC TGACGCTTAC CTTTATTCTC      1020

AAATCAATGG TGGTAACGCC TTGTCTATCC CTTATGCCAA AGGATTTGGC TGGGGGGCAG      1080

AACTGACCCT CAAATTGATG TTTGAACGCT TATTTGCTGA AGAAATGGGC GGTGGCTACC      1140
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553

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CAAGAGAACG TGTAATCCCT GAACAACGCA ACGCTCGTAT CTTAAACGAG GTGAAACAAA      1200

TCACCCACAA TGATTTGATG ACCATCCTTA AAATAATCGA CCAAGACTTC CTCAAAGACA      1260

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CTGCTTATTT GAAAGAAGTA TTAGCCAAGT AAAGCTATTC TAAACCAGAA AGGAACTAAT      1380

GGATGACGAA AATATTACTG TTTGGCGAAC CATTAATTCG AATTTCACCA TTAGATGCCA      1440

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TCGGTCAAGA GGTCCGTGCG ATCCTTCTCC TACTCTTGGA AGAAGCCAAG CGCCGAGGAA      1860

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AGTCTGTCCA ACTAAAAACT GCAGTCTATC AACGAATTGG TAGCGGGGAT GCCTTTATAT      2220

CTGGTGCCCT TTACCAACTA CTCCATCATT CCTCCCTAAA AACTACCATT GACTTTGCAG      2280

TTGCGAGCGC AACTCTCAAA TGCACTCTTC CAGGAGACCA TCTCTCCACT TCCTCAACTA      2340

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CAGCATATAT CTCTGCAGTC AAGGCACCGA TCCCACAAGT TTCCGTAATG GTAACCGGAG      2880
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TTCCCAAACT TGTACTTGAG ATTGGCGTGT TTGTCAAACA TCATGAGTGC ACTTTTGCCT    3540

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TCTTAGTACT TCTACTGCGG CCACGTGCCC CTCGCTATTT GCACGACTGA TCGAGCGTCC    5640

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556

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GTCATCCAAA CGGTCTGTGT ATGCATCCTT AACAGAGGCC AGAATCTTCA AAGGAATCTT        6540

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CCACAATCGC TTGTCCTTAC CACTTTCCTC AATGATACGA ACTTTGGCAA TCCCGATTTT        6960

ATTATCTGTT TTAATCTTGA AACGCAGTTT ATACTTTTTC TTAGCTTCAA TAGGAACCAT        7020

ACGGTGAAGC GCTGCCCTTA ATTTCTCATG GCTTGAGATA GTGATAGCCC CATCCTTAGC        7080

CTCAATGACT CGAGTTGAGG CATCTGCACT ATTCTTCTGG TCTACCCAAG CTGACCACCC        7140

CCTGAGCTTT GCTTCCTGTC CGG                                               7163
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(2) INFORMATION FOR SEQ ID NO: 68:

       (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 9244 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: double
           (D) TOPOLOGY: linear

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

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CGTTATAACA TACATGTAAG CGGTACCCAA AATGGTGCCA AGTCAAAATT TTTAAGGAGG         60

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TCTTTTTGAT GATATTCCTT TCTTGGAAGA TGCTCAAAAA GAACATGATG CATTTGCCCA        240

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AGCTAAAGAT CTAACTGACT TAGTTGAATC AGAGTATCCA TTTGCAATTG ACCCGATGCC        540

AAACCTCTAT TTCACTCGCG ACCCATTTGC AACAATTGGA AACGCCGTAT CGCTTAACCA        600

CATGTTTGCA GACACTCGTA ACCGTGAAAC ACTCTACGGT AAGTATATCT TCAAATACCA        660
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557

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GAAAGTTTTG	GCCTTTGAAT	TTGCTAACAA	CCGTAAATTC	ATGCACTTGG	ATACTGTCTT	900
CACTATGGTA	GACTATGACA	AGTTCACTAT	TCACCCAGAA	ATCGAAGGCG	ACCTTCACGT	960
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TGAACTTCTT	GCTCAAAACC	TTGGTGTAGA	AAAAGTTCAT	TTGATTCGTT	GCGGTGGTGG	1080
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CGGGCTTCGC	TTGATTAAGA	TTCGCGGAAG	TGAATTGGTT	CGGGGCCGTG	GTGGACCTCG	1260
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GAAAATGTAA	AAAATAGAAA	GAGGAAATAA	TAAAATGACA	AATTCAGTAT	TCCAAGGACG	1380
CAGCTTCTTA	GCAGAAAAAG	ACTTTACCCG	TGCAGAGTTA	GAATACCTTA	TTGGTCTTTC	1440
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TGGCGCACAT	GTTCTCATCA	CTGAAGATGC	TGATGAAGCA	GTTAAAGATG	CAGACGTTCT	2040
TTACACAGAC	GTTTGGGTAT	CAATGGGTGA	AGAAGACAAA	TTCGCAGAAC	GTGTAGCTCT	2100
TCTTAAACCT	TACCAAGTCA	ATATGGACTT	AGTTAAAAAA	GCAGGCAATG	AAAACTTGAT	2160
CTTCCTACAC	TGCTTGCCAG	CATTCCACGA	TACTCACACT	GTTTATGGTA	AAGACGTTGC	2220
TGAAAAATTT	GGTGTAGAAG	AAATGGAAGT	AACAGACGAA	GTCTTCCGCA	GCAAGTACGC	2280
TCGCCACTTC	GATCAAGCAG	AAAACCGTAT	GCACACTATC	AAAGCTGTTA	TGGCTGCTAC	2340
ACTTGGTAAC	CTTTATATTC	CTAAAGTATA	ATTTTAGATA	ATAAACCGTC	TACCAACAGC	2400

558

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CCTCGGTGGT ACAACTTATG GTATGGGTGA AGAAACAATG GCCTTCTATC CACTCCTTGT   4140

GCCAGTTATG ATGGCCGTTG GTTTTGATAG CCTGACTGGT GTTGCAATTA TTTTGCTCGG   4200
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559

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CAACATTGGT ACTTGGTGGA AATTCATGGG CAAACTCGTA GTCGCTATTA TTGTAGTGAC    5160

CATCGCCCTT CTTCTCCTTG GAACCTTCCT TCCATTCCTA TAAAATAGTG AGTGAGGTGA    5220

TTCCATGAAA ATAGATATAA CAAATCAAGT TAAAGATGAA TTTCTTATAT CATTAAAAAC    5280

CTTGATTTCC TATCCTTCAG TACTCAATGA AGGAGAAAAT GGAACACCTT TTGGACAAGC    5340

AATCCAAGAT GTCCTAGAAA AAACTTTAGA GATTTGTCGA GACATAGGTT TCACTACCTA    5400

TCTTGACCCT AAAGGTTATT ACGGATATGC AGAAATCGGT CAGGGAGCAG AGCTTCTGGC    5460

CATTCTCTGT CATTTGGATG TTGTTCCATC AGGTGATGAA GCAGATTGGC AGACACCGCC    5520

ATTTGAAGCA ACTATCAAAG ACGGCTGGGT ATTCGGACGT GGTGTCCAAG ATGATAAAGG    5580

CCCTTCGCTC GCAGCTCTCT ATGCAGTAAA AAGCTTGCTG GACCAAGGTA TTCAGTTCAA    5640

AAAGCGCGTA CGCTTTATCT TTGGTACCGA TGAGGAAACC CTCTGGCGCT GCATGGCACG    5700

CTACAATACC ATCGAAGAAC AGGCCAGTAT GGGCTTTGCA CCTGACTCAT CTTTTCCTCT    5760

GACCTATGCT GAAAAAGGGC TTCTACAGGT CAAACTTCAT GGCCCTGGAT CGGATCAACT    5820

AGAGCTTGAA GTAGGAGGCG CCTTTAACGT TGTACCAGAC AAGGCCAACT ACCAAGGTCT    5880

CCTCTATGAA CAGGTTTGTA ACGGTCTCAA AGAAGCTGGT TATGATTACC AAACCACTGA    5940
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560

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ACAAACCGTA ACGGTTCTCG GAGTGCCAAA GCATGCTAAG GATGCTAGTC AAGGTATCAA      6000

TGCTGTCATC CGACTAGCTA CCATTCTTGC TCCTCTCCAA GAACACCCTG CTCTCAGTTT      6060

TCTTGCAACA CAAGCAGGTC AAGACGGCAC AGGAAGACAA ATCTTTGGTG ATATAGCAGA      6120

TGAACCTTCT GGTCACCTAT CCTTTAATGT CGCAGGTCTC ATGATCAATC ATGAACGTTC      6180

TGAAATCCGT ATTGACATTC GGACTCCTGT CTTAGCTGAC AAGGAAGAAC TAGTAGAGTT      6240

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TCTATACGTC GCAGAAGACA GTAAACTCGT TAGCACACTG ATGCAAATCT ACCAAGAAAA      6360

GACTGGCGAT AACAGTCCTG CTATTTCATC CGGTGGTGCC ACTTTTGCTC GCACCATGCC      6420

AAATTGTGTA GCCTTCGGCG CCTTATTCCC AGGAGCGAAG CAGACAGAAC ATCAGGCAAA      6480

TGAATGTGCC GTTCTAGAAG ATTTGTACCG TGCTATGGAT ATTTATGCCG AAGCCGTCTA      6540

TCGACTTGCA ACTTAATCAG GCAACTGTTT CTACCAAAAA AAATCGACCG ATTAATGAAC      6600

TGCACCCCAA AAGTTAGACA GAATAAATCT AACTTTTGGG GTGTTTTATT ATGAAATTGA      6660

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TGTATATCGA TGTTTTTTGT TTTTCTTAAT AAACGCAATA CAAAAAGAGC CTGTTACCAA      7680

GCTCTTTGTA CTCAATGAAA ATCAAAGAGC AAATTAGGAA ACTAGCCACA GGTTGCTCAA      7740
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561

AACACCGTTT TGAGGTTGCA GATAGAACTG ACGAAgTCAG CTCAAAACAC TGTTTTGAGG   7800

TTGCAGATAG AACTGACGAA GTCAGTAACA TCTATACGGC AAGGCGACGC TGACGTGGTT   7860

TGAAGAGATT TTCGAAGAGT ATTAGTCTAT TATTTCTTCT CAGCGCGAAG GGCTGACAAG   7920

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TGCTGACGAA CCACATAAAC TGTACTCAGT GTGACTATCA CCAATAGGAG CACACAAACA   8760

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TATAGCACAT TTAAAGAAGG CTGTGCCGTT TTTACTGCGA TTTTTCCTGA AATGTCAATA   8880

ATTAGAGGTG AATTGTCCTA TTGTCGTCCA ATCTCTTGCT AAAATAACTC TTTATAAAAG   8940

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GCATTCTTAG AAAGGTATTC AAAGTCGAAA TCTTTTTCTT CAATACCAAG TTCAGTCAGT   9060

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CATTCTTGAT CTGATTTACC TTCTACATGA AGTCCCAAGG CTTTGGCAAC ATTGCGGAAA   9180

GCTTCTGGTA CACGTTTAGC ATTTTCACGT TCTATAACTG GTAGCAACAT GGCACAGCAC   9240

ACGG   9244

(2) INFORMATION FOR SEQ ID NO: 69:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8898 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double

562
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

GATCTGAACT TTATCATCAT AACTTAATTT CATAATAAAA ACACCCCAAA AGTTAGATTT   60

TTTCTGTCTA ACTTTTGGGG TGTAGTTCAG TCATTGGACT GACGTTTTTT TGTATGCTTA   120

TTTTGATTTG ATGTAGTTGA TACCATCTGC TTTTGGTGCG ACTGCTTTTC CAAAGAAGGC   180

TGCTAAGACA AGAATTGTCA AAACATAAGG TGCAATTTGA AGATAAACCG CTGGCACTCC   240

TTGTAGGAAC GGCAATTGAG AACCGATAAC AGCCAAACTT TGTGAAAGTC CAAAGAAGAG   300

ACTAGAAAGC ATAGCACCGA TTGGATTCCA TTTCCCAAAG ATCATCGCAG CAAGGGCGAT   360

AAATCCAGGT CCAACAATAG TTGTCACTGA GAAGTTAACT GAGATTGATT GCGCATAAAT   420

CGCTCCGCCA ATTCCACCTA GAAAACCTGA AATAATAACC CCTAAATATC TCATCTTGTA   480

GACGTTGATT CCCAAGGTAT CCGCTGCTTG AGGATGTTCA CCGACAGAGC GGAGACGAAG   540

ACCAAATTGA GTCTTAAAGA GAATAAACCA AGCAAGGAAT GAGAAGGCAA TCGCCAGATA   600

ACCAAGTAGA CTAGTTGACT TGAAGAAGAT ATCACCAATC ACTGGGATAT TTGCCAAGAC   660

TGGGAAATCA AAGCGTCCAA AAGTTTGACT TAGGTTGTCG GTTTGTCCTT TGTTATAAAG   720

AACTTTAACT AAGAAAACAG CCAAGGCAGG CGCCATCAAG TTCAATACCG TACCGCTGAC   780

AACATGGTCT GCACGGAAAT GAACCGTCGC TGCTGCGTGG ATGATAGAGA AAACACTACC   840

AACCAATCCT GCTACAAGCA AGGATAGCCA TGGAGTTGCT GCTCCAAATT GTTCTGCAAA   900

TTCAAGGTTA AAGACAACTC CAGAAAAGGC ACCCATAACC ATAATTCCTT CAAGGCCAAC   960

GTTTACCACA CCACCACGTT CAGAGAAAAC ACCACCGATA CTTGTAAAGA TGAGAGGTGC   1020

TGAGTAAATC AGCATAGAAG ACACCAAGAG GGGGAGCAAG GTTATAATAG ACATCTTTAC   1080

TTACCTCCTT TAACTTGTTT TTTCGGTTTG ACAAAGCGTT CGATAAGGTA ATGAACACTG   1140

ACAAAGAAGA TAATAGACGC TGTTACAATG CTGACAAGCT CAGATGGTAC CTGCGCCGCA   1200

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ATTGGTGAGT TGGCCGCAAG CAAACTAACC GCCATTCCGT TAAATCCGAT AGCTAATGAC   1320

GAACCTTGAA CATAGACGTT CTGGAAGGTT CCCAAACCTT CAACAGCTCC ACCAAGACCT   1380

GCCAAGGCAC CTGAAATAAT CATAGATAGG ATAATAGTCC GCTTGGCAGA AATACCAGCA   1440

TATTCTGAAG CATGTGGATT AAGACCAACT GCACGGATTT CAAAACCAAG AGTTGTTTTC   1500

TTGAGCATGA ACCAAATAAC TGCAACGGCA ATGATGGCAA AGAAAATACC AATATTCATC   1560

CGTGAGTTAC CAGTCAACTC AGCCAACCAA GGTGTCTGAT AGGTTGCATT AGCCCCAACA   1620

563

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CGAATGGTCG AATCTGTACT TTGCATGAAG TCTTTAGGGA AAGCATGGAT AAAGGCATTC    1680

CCTACATACA AGACAATGTA GTTCATCATG ATGGTTACAA TAACCTCTGA CGTCCCTAGA    1740

TAGGCCCTAA GAATACCTGG AATCGCTCCG ACAATCCCAC CAGCAATCAA GGCAATCACG    1800

ATGGTTGCTA GAATCATCAA GGGACGGGGC ATATCTGGAT GCGACAGGGC AAACCAACCA    1860

CTGAGAATCC AACCTGCCAA AGCCTGACCA GGAAGTCCGA CGTTAAAGAA ACCAGCTCGA    1920

CTGGCAACGG CAAAACCAAG ACCAATCAAG ACCAGAGGAC CCATAGCACG GAAGATTTCT    1980

CCAATCCCAC GCAGACTGCC AAAGGCTGTA TAGAACAATT CTTCGTAGCC CCAAATAGCA    2040

TCATAACCGA AGATCCACAT GACAATGGCT CCGAGTAAAA TTCCTAGGAA TACAGAAATC    2100

AAGGGAACCG AAATTTGTTG TAATTTTTTA GACATCACTC TTCTCCTTTC CCAAGTTTCC    2160

ACCAGCCATC AAGACACCAA GTTCTTGTTT ATTGGTTGTT TCTGGTGATA CAATACCTTG    2220

AATCTTACCA TCGTGGATAA CGGCAATACG GTCTGAGACG TTTAAAATCT CATCCAATTC    2280

AAAGCTGACA ACAAGGACAG CCTTGCCATT ATCACGCTCT TCAATCAAGC GTTTGTGGAT    2340

ATACTCAATG GCACCGACAT CCAACCCACG AGTTGGCTGG CTAACGATAA GGAGATCAGG    2400

ATCTCGATCA ATTTCACGAG CAATAATTGC TTTTTGTTGA TTTCCTCCTG AGAGTGCAGC    2460

TGCAGGAACT AATTCACTGG CAGCGCGAAC ATCAAACTCT TCCATCAGCT TTTTAGCATA    2520

AGAAGTAATA TTTGAATAAT TCAAAATTCC ATTTTTACTA TGTGGTTCTT TATAGTAGGT    2580

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AATTGATTTC CCACGACGGA TAACTGTAAC ACGGTCAGAA ACTGCTCGAA TTTCATCCAA    3060

TTTGTGGGTA ATCAAGATAA TTGATTTTCC TTCTTTGACA AGATTTTTCA TAATAGCCAT    3120

CAACTCATCA ATTTCTGATG GAGTCAAAAC AGCCGTTGGT TCGTCAAAGA TAAGGATATC    3180

AGCCCCCCGA TAAAGTGTTT TTAAAATTTC TACACGTTGT TGGGCTCCAA CTGAGATATC    3240

TGCTACCTTG GCAGAAGGGT CAACAGCTAA GCCATAACGT TCAGAAAGAG CCTTGATTTC    3300

TTTGCTAGCT CCAGCGATAT CTAGCACACC ATTTTTAGTC AATTCACTAC CTAAAATGAT    3360
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564

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GTTTTCAGCC ACTGTGAAGG CTTCAACCAA CATAAAGTGC TGGTGAACCA TCCCGATTCC    3420

CAAGCTAGCT GCTTTAGATG GGGAGTCGAG ATTGACAACT TGACCGTTGA CCGCGATTTC    3480

ACCACTAGTT GGTTCAAGAA GGCCTGCTAA CATGTTCATT AGCGTGGACT TACCAGCCCC    3540

ATTTTCTCCT AAAAGTGCAT GAATTTCACC TTTTCGTAGG TGCAAGTTGA TTTTGTCGTT    3600

GGCAACAAAT CCACCAAACA CCTTGGTAAT ATCACGCATC TCAATGACAT TTTCGTGTGC    3660

CATGTGCTCT TCCTTTCAGA GTCTTATTTT ATTTCAATAA AACTTGCTAG TTTGTCTAGT    3720

AGCAAGCTTT ACTTAGACAA AATGACTTTG TCTCAACTCT TAAAAAAGCG GCCCTTGGCC    3780

GCTTCCTAAG AAATGACTTC CATCCATTAT TTTTCAGGAA CTTTTACGCT TCCATCAAGG    3840

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GCCTCTGCAA AGACACCTGC ACCTGTACCA CCAGCTACTT GGTAAACAAT ATCTGCACCG    4200

GCTGCGTATT GTGCGGCTGC AATTGTTTTA CCTTTAGCCG CATCACCAAA TGAACCAGCG    4260

TAGTCAACTT GGACTTTGAT AGATGGGTCT ACTGACGCAA CACCAGCCTT GAATCCTGCT    4320

TCAAAACGAG AGATAACTTC AGATTCGATA CCACCTACAA AACCAACTTG TTTTGTCTTA    4380

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CTTGTTCAAA AAATTCAGCC ATCACTTGGC GACAAGCACC ACATGGCGAG ATCGGTTTTT    5100

CAGTTTGACC ATAGACAATC AATTCTGAAA ATTCTCTTTG GCCTTCAGAT ATAGCCTTAA    5160
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565

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AAATAGCTGT TCTCTCACCG CAATTGGTCA AAGGATAGCT AGCATTTTCA ATATTCACTC      5220

CCGTGTAAAC ACTTCCGTCT TTAGCTACTA AAACTGCTCC GATAGGAAAG TGAGAATAGG      5280

GGACATAGGC ATGTTTGCTG GTTTCAATTG CCAGTTCAAT CAACTCAGTA GTCGCCATCT      5340

GCCAATTCTC CTTTTAAAAT AGCTACCCCA GCTGACGTTC CGATACGGGT CGCACCTGCT      5400

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TCAGATCCAA CTGTTTCACG CATTAATGTA ACATCTGCTA TCGTAGCACC ACCAGTTGAA      5520

AAGCCAGTAG ATGTTTTGAC AAAGTCAGCC CCAGCTTTTT GGGCCAATTG GCAAACAACA      5580

ACTTTTTCTT GGTCTGTCAG AAGGCAAGCT TCAATAATGA CTTTCACTAA CTTATCACCA      5640

CTTGCTTCCA CTACTGCGCG AATATCTGAC TCAACCAAGG CTAAATTACC TGATTTGAGA      5700

GCTCCAACAT TGATCACCAT ATCAATCTCA TCTGCACCAT TTTGGATAGC TTCTTTTGTC      5760

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TTAACATCTG TGCCTTCAAG TCCTTTTTTA GCATGTTCAA CCCAGGTCGG ATTAACGCAA      5880

ACACTGGCAA AGTCATACTC TCTAGCCTCA GACAACAAAC TATCAATTTG TTTTTTCTTT      5940

GCATCTTGTT TTAAAAGCGT ATGATCTATA TATTTATTTA ATTTCATTTC GGTTTTCCCT      6000

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CGACACCACC AGTAGAATGC TTGTCAACTT TCACACCATC AATGGCTGAC AGGTCAAACT      7080

CTTGCCCAGT CTTAACCATA TTCATCGTTA AATCAGAGAT TTCTCGAGTC GTCATTCCTT      7140

TAAAATAAAC AGCCATAGCA AAGGCAGACA TCTGATAATC AGGAACAGTT CCTGATACAT      7200

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CGCCTGAACT CCGTAAACCT TGACCAAGGA CAAACCTAAT GGACCATAAC CACAGCCTAC      7680

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GATAGACAAA ATATCTAGGG GAAAACAAAT GACCAACGAA TTTTTACATT TTGAAAAAAT      8700
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567

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CAGCCGCCAG ACTTGGCAAT CTTTACATCG AAAGACAACA CCTCCTTTGA CAGAAGAAGA      8760

ATTGGAATCT ATCAAGAGTT TTAATGACCA AATCAGTCTC CAAGACGTTA CAGATATCTA      8820

TCTCCCCTTG GCTCATTTGA TTCAGATTTA CAAGCGAACT AAGGAAGATT TAGCCTTTTC      8880

AAAAGGAATT TTCCTCCA                                                    8898
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(2) INFORMATION FOR SEQ ID NO: 70:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 13188 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

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TATCTTAACG aGGATTGGGT TTATCGTCAG TCTTATTGCC CTAATTGTGG GAACAATCCC        60

TTAAATCATT TTGAAAATAA TCGGCCTGTA GCAGATTTTT ACTGTAATCA TTGTAGTGAG       120

GAGTTTGAAC TAAAGAGCAA AAAAGGAAAT TTTTCATCAA CAATCAATGA TGGTGCTTAT       180

GCAACGATGA TGAAGCGTGT GCAGGCAGAT AATAATCCTA ATTTCTTTTT TTTAACTTAC       240

ACAAAAAATT TTGAGGTAAA TAACTTTCTT GTCCTTCCGA AGCAATTTGT TACACCGAAA       300

TCGATTATTC AAAGAAAACC ACTTGCACCA ACTGCTAGAC GAGCAGGTTG GATTGGTTGT       360

AACATTGATT TATCACAAGT ACCTTCTAAA GGAAGGATAT TTCTTGTGCA AGATGGACAA       420

GTTAGAGATC CAGAAAAAGT TACAAAAGAA TTTAAGCAAG CTTTATTTTT AAGGAAGAGC       480

TCTCTGTCAT CAAGAGGTTG GACAATAGAA ATTCTAAATT GTATAGATAA GATAGAGGGT       540

TCAGAATTTA CCCTTGAAGA TATGTATCGT TTTGAAAGTG ACCTAAAAAA TATCTTTGTT       600

AAGAACAATC ATATCAAAGA AAAGATTAGG CAACAGCTTC AAATATTAAG AGACAAAGAA       660

ATAATAGAAT TTAAAGGTAG AGGAAAGTAT CGGAAATTAT GAAAACGAAA CAACTTGTTG       720

CATCAGAAGA GGTGTATGAT TTCTTAAAAG TCATCTGGCC TGATTATGAA ACTGAAAGCC       780

GTTACGATAA CCTAAGTTTA ATCGTCTGTA CCTTATCAGA TCCCGATTGT GTGAGATGGT       840

TATCTGAAAA TATGAAATTT GGTGACGAAA AACAACTAGC TTTGATGAAG GAAAAATATG       900

GGTGGGAAGT AGGAGATAAA TTGCCAGAGT GGCTACATAG CTCCTATCAT AGATTATTGT       960

TAATAGGTGA ATTATTGGAA AGCAATCTAA AACTGAAAAA GTATACAGTA GAAATTACAG      1020

AAACTTTATC ACGTTTAGTA AGTATAGAGG CTGAAAATCC AGATGAAGCC GAACGACTTG      1080

TAAGAGAAAA GTATAAGAGT TGTGAAATTG TTCTTGATGC AGATGATTTT CAGGACTATG      1140
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568

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ACACTAGCAT ATATGAATAG GTAGATGTTT TTATTTTGTC AACAAAAAAG AGGCTCGCAC    1200

CTCTTTTTCT TATTTCTTTT TATGATTTAA TACGGCATTG AGGACAATAG CGAGTAGGCT    1260

GGCTACGACG ATTCCGTTTG AGAAGAACAT TTGGAAGGCT GTCGGCATGC TGACAAAGAG    1320

ATTACTGTTG TTGAGACCGA CACCTGCAGC GATTGAAACA GCTGCGATAA GGAAGTTGTG    1380

TTCATTGTTA GCAAAGTCAA CACGGGCGAG GATTTGCATC CCTTGAATTG ATACAAAACC    1440

AAACATTACC AGCATGGCAC CACCGAGGAC GGAGCTTGGA ATGATTTGGG CAAGGGCGCC    1500

AAACTTAGGA AGCAGTCCAA GGAGAACCAG GAAACCAGCT GCGTAGTAGA TTGGCAGGCG    1560

TTTTTTGATG CCTGACAATT TAACCAAACC AACGTTTTGT GAAAATCCGG TGTAAGGGAA    1620

GGTGTTAAAG ATTCCTCCGA GAAGTACGGC CAAACCTTCT GCGCGGTATC CGTTGCGAAG    1680

GCGCGTGCTG TCGATTGGAT CCTTTGTGAT ATCAGACAAG GCCAGATAAA CACCAGTTGA    1740

CTCAACCATA GACACCGTTG CGATGATACA CATCATGACA ATAGATGAGA TTTCAAAGGT    1800

TGGCATCCCA AAGTAGAGTG GAGTTGGGAC ATGGACAAGT GGAGCTACCG CAACAGGAGA    1860

GAAGTCCACC AAGCCCATAG TAGCAGCAAT GGCAGTTCCA ACAACCAGAC CAATCAAAAT    1920

AGAGATAGAC TTGATAAATC CTTTGGTAAA GATGTTGATC AAGAGGATAA TCAGAACAGT    1980

AATAGCTGCA AGCAAGAGAC TTTGACCAGT TGGCTCTGGA ACGTTATTTC CCATATTTCC    2040

AATAGCGACA GGGATCAAGG TTAAACCAAT CGTGGTAATA ACAGATCCTG TTACGATAGA    2100

TGGGAAGAGA TTGGCTACTT TTGAGAAGAT GCCTGAAACA AGAACCACGT AAATCCCAGA    2160

TGCGATAAGG GCACCAAACA TAGCGCCACT ACCATGGCTT TGCCCAATCA TAATCAAGGG    2220

AGCGACCGAC TGGAATGCAA CTCCAAGAAC GACTGGGAGT CCAATCCCAA AGTATTTGTT    2280

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GGTCAACTGC TCAGCTGAAT AGCCAAGGGC TGTCGCAATC ATGATGGGAA CCAGGATAGA    2400

TCCTGAGTAC ATGGCTAGTA AGTGCTGCAA GCCAAGAACG GCTGCTTGCG AGTGTTTTTC    2460

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TCCTCTGGTG AGAGGAATTT TTCAGCGATA GAAACGGTGC TGGTCACCTG CTTGGTAAAG    2760

GAGTAGACTT GAGCAGTTAA GATGCCTTCG TTCATGGTGA TGTTCTTAGC TTTTTTGGCG    2820

AAAATCATGG GAACGTTTAA GGCTTCAGCT GTAAAAACGG CTGGGGCAAT ACCCGACGCT    2880

TCAATGGTTA CGACCTTGGT AATGCCAGTA GTAGCAAATT TTTCCGCAAA AACCTTACCA    2940
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569

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ATCTCTCGCA TCAAGCTAAA GTCAACTTGG TGGGTTAAAA AGGAATCTAC CTTGAGGATG    3000

TTATCACCCA AGATATGCCC ATCCTTGAGG ATGCGCTCTT CTAATAATTT CATAAGACCT    3060

CCTAAAGTCT AAAAGTTAAT TTACTTGTTG TTTAAATATT TCTATAGTGA TCCCTTTTGC    3120

TAATACTATA TATTTGATAA AACTATTACG AGCGAAGCGA GTCTTATCAA ATATTTCCCG    3180

TTGTAGTGGT ATCATAGACA ATAATCTTGT TATTGTCTAT GACGGGATTT TTGAGAGTAA    3240

AATAGTTCGG GGAACTATTT TAGCCTAAGC CTAGAAATGA AAGAGCTAGG GGCTCAAAAA    3300

TTAGGGATGA AATTCCCTGG ATTCCTGAAA TTATTCACAG GATAATTTCA CCTCCCGTCC    3360

GCACTAATTA AGGGAAATAT TAAAAAAAGA CCTACTTAAT CTCTAAGTAA GTCCCCTAAA    3420

TAGACATGGC AAAAACGGCC ATATCTCACT GCTGACTTAC TTATTGTTAG GTGTTCCGGC    3480

ACCTTGTAGA AACGTCGTGC CAATTCACGA CATAAACAAG TAAAACGATA TTCAATTTTA    3540

AATAGGCTTG AGCCAATGTT TTTATTTTAC ACTAAATAAC TTTAGAAATC AACTATTTTG    3600

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AAGCTAACAG TTATACTAAA TGAAAATCAA AGAGCAAACT AGGAAGCTAT CCACAACCTC    3720

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CTTTGTTCCC TCCTCTAACA TTAGTTGACA CTCTTCAAGA GAAAGAGAAA GTTTTCTTCT    4200

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ATATTCGATA CAAGCAACTC GGGAATGACC GCATTGTAGT CCATATAGAA AATCCTTACA    4320

AGTCAATTTC CAAGACAATC GGTGTATGGT CTTGGCGAGC ACCTGAGTCA ATCATATCAG    4380

ATTTAGTGAC CTTGTCAGCG ATACGGTTAC TTGTGAGCCA GTAGTCGATT CTCCAGCCTG    4440

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CGCCATGAAC ATGGCGGAAG GTGTCTGTAA ATCCAGTTGC CAAAAGGTTG GTAAATCCAG    4560

CACGTTCCTC GTCAGTAAAT CCAGGTGAAC GGCGGTTGCT AGCAGGATTT GCAAGGTCGA    4620

TTTCATTGTG GGCTACGTTG TAGTCACCGG TCGCAAGGAC TGGTTTTTCT TTGTCTAGTT    4680
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570

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CAGCCAAATA CTCAGCATAT TTGGCATCCC AGACTTGGCG TTCTTCCAAG CGTTTGAGAC    4740

CGTCACCAGC GTTTGGAGTG TAAACTTGGG TTACGAAAAA TGCATCAAAT TCTAGAGTGA    4800

TGATACGACC TTCCAAGTCC ATGGTAGAAG GGGCACCGAT TTCTGGGAAG CTGATAGTAG    4860

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GCCCTAAATG GAAGTGAGCC AGACAAGTAC CTGTTAGAGA AAGTCGAATT GTATAAGACA    5700

GACGCAATTG AACTGGTGGA TGTGAACAAA TGACACTTAA TTATATCGAA ATTTTAATCA    5760

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ATGAAAATCC TAAGTATCCA GTTGTGACTG ACGGTGTGAT TCAAGTAGAT GTCTTGGAAT    6060

CGATTGGTCG TAGCGAAGAG TGGTTGCTTG ATAACCTCAG TAAACAAGGG CATGACAATG    6120

TAGCCAATAT CTTTATTGCT GAATATGACA AGGGTGCTGT TACAGTCGTA ACTTATGAAT    6180

AAGAAAAACC TGGGGTCTTG TACTCTTCGA AAATCTCTTC AAACCGCGTC AACGTCGCCT    6240

TGCCGTATGT AGGTTACTGA CTTCGTCAGT TCTATCTACA ACCTCAAAGC AGTGCTTTGA    6300

GCAGCCTGCG GCTAGTTTCC TAGTTTGCTC TTTGATTTTC ATTGAGTATT GGCCTCAGGT    6360

TTCCATTTGC AATCAGAAAG GGATTTTATG TCCATTATTC AAAAACTTTG GTGGTTTTTC    6420

AAGTTAGAAA AACGCCGTTA TCTAGTCGGA ATTGTGGCCC TGATCTTGGT TTCCGTCCTC    6480
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571

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AATCTCATTC CTCCTATGGT TATGGGGCGG GTCATTGATG CCATCACATC GGGGCAATTA    6540

ACCCAGCAGG ACCTCCTTCT TAGCCTATTT TACTTGCTAC TTGCAGCCTT TGGTATGTAC    6600

TATTTGCGCT ATGTGTGGCG TATGTATATC CTTGGGACCT CTTATTGCTT GGGACAGATC    6660

ATGCGGTCTC GCTTGTTTAA GCATTTCACA AAAATGTCGT CAGCCTTTTA TCAAACCTAT    6720

CGGACGGGTG ATCTGATGGC ACACGCAACC AATGATATCA ATGCCTTGAC TCGTTTAGCA    6780

GGTGGCGGTG TCATGTCTGC GGTGGATGCC TCTATCACGG CTCTGGTGAC TTTGTTGACC    6840

ATGCTCTTTA GCATCTCATG GCAGATGACT CTTGTTGCCA TTCTCCCCCT ACCTTTCATG    6900

GCCTATACGA CTAGTCGCCT AGGGAGAAAG ACTCATAAGG CCTTTGGCGA ATCCCAAGCT    6960

GCTTTTTCTG AACTCAATAA CAAGGTACAG GAGTCCGTAT CAGGTATCAA AGTGACCAAG    7020

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ACGCACGAAG ACTTGCTAGC TTTGGATGGC TGGTATGCCC AAACCTACCA GTCTCAGCAG    8100

TTGGAAATGA AAGGAGAAGA AGATGCAGAA TAAACAAGAA CAATGGACTG TATTGAAGCG    8160

CTTGATGTCT TATCTCAAGC CTTATGGACT CCTGACCTTT TTGGCACTCA GTTTTCTCCT    8220
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572

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AGCGACGACG GTCATTAAAA GTGTCATACC CCTCGTGGCT TCCCACTTTA TCGACCAGTA    8280

TCTCAGCAAT CTTAACCAAC TAGCCGTTAC CGTTTTGCTG GTCTACTATG GTCTCTACAT    8340

CCTACAAACT GTAGTTCAGT ATGTCGGCAA TCTTCTCTTT GCGCGCGTGT CTTACAGTAT    8400

TGTTAGGGAT ATTCGTCGGG ATGCCTTTGC CAATATGGAG AAACTGGGCA TGTCTTACTT    8460

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TATTCAGGCC TTTAATCAAG AGAAGCGCCT GCAGGCAGAA TTTGATGAAA TCAACCAAGA    8820

ACACTTGGTC TACGCCAACC GTTCTGTAGC CTTGGATGCC CTCTTTTTGA GACCTGCCAT    8880

GAGTTTGCTG AAACTTCTAG GCTATGCAGT CTTGATGGCC TACTTTGGCT ACCGTGGTTT    8940

TTCTATCGGG ATAACGGTCG GGACCATGTA TGCCTTTATC CAGTACATCA ACCGCCTTTT    9000

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CCAGTCAGGG AGAGTTCTCT TGGATGATGT GGATATCAGG GATTTCAGTC AAGAAGAGCT    9360

GAGAAAAAAC ATCGGTTTGG TCTTGCAGGA ACCCTTCCTC TATCATGGAA CTATTAAGTC    9420

CAATATCGCC ATGTACCAAG AAACCAGTGA TGAGCAGGTT CAGGCTGCGG CAGCCTTTGT    9480

GGATGCAGAT TCCTTTATTC AAGAACTTCC TCAGGGGTAC GACTCCCCTG TTTCCGAGCG    9540

TGGTTCGAGC TTCTCTACTG GGCAACGCCA GCTTCTTGCC TTTGCTAGAA CAGTCGCCAG    9600

CCAGCCTAAA ATCCTGATTT TGGATGAAGC GACAGCCAAT ATTGACTCTG AAACAGAAAG    9660

CTTGGTTCAA GCTTCTCTGG CGAAGATGAG ACAGGGCCGA ACAACTATTG CTATCGCTCA    9720

CCGCCTTTCT ACTATTCAAG ATGCCAACTG CATCTATGTC TTGGATAAGG GACGCATTAT    9780

CGAGAGTGGA ACCCATGAGG AACTCTTGGC TCTGGGAGGA ACCTATCACA AGATGTATAG    9840

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ATCTGCAATC TCAAAGCTGT ACTTTGATTT TCATTGAGTA CTAGAAGGAA ATCCTTCAAA    9960

TTACAGATTT CTTTCACCGC CTTTTCCATT TTGTGGTATA ATGAAAAATG TTGACAAATA   10020
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573

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GTATAATAAA AACAAAGGAG AACAGCATGC TGAAATGGGA AGACTTGCCT GTGGAAATGA    10080

AATCAAGCGA GGTTGAGTCT TACTACCAGC TTGTCTCTAA AAGGAAGGGT TCGCTGATTT    10140

TCAAGCGTTG CTTGGACTGG GTTTTGGCCT TGGTCTTACT GGTTCTGACC TCTCCCATCT    10200

TTCTCATCTT GAGCATTTGG ATCAAGTTGG ATAGCAAAGG GCCAGTGATT TACAAGCAAG    10260

AGCGTGTGAC CCAGTACAAC CGTCGGTTCA AGATTTGGAA GTTTCGTACC ATGGTGACGG    10320

ATGCGGATAA AAAAGGAAGT CTGGTGACTT CTGCTAACGA TAGCCGCATT ACCAAGGTTG    10380

GAAATTTCAT CCGACGTGTC CGTTTGGACG AACTGCCTCA GTTGGTCAAT GTCCTTAAAG    10440

GTGAGATGTC CTTTGTCGGT ACACGACCTG AAGTGCCACG TTATACAGAG CAGTATAGCC    10500

CTGAAATGAT GGCAACCTTG CTCTTGCAAG CAGGGATTAC CTCTCCAGCC AGCATCAACT    10560

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GGGAATACGA TATCGTTACA CCAGCCTATA AGTGCAACAT GACCGATATC ATGGCTTCAC    11580

TTGGTTTGGT ACAATTGGAC CGCTATCCAA GTTTGTTGCA ACGCCGTAAG GACATTGTGG    11640

ACCGCTATGA TAGTGGTTTT GCAGGTTCTC GCATCCATCC TTTGGCACAC AAGACTGAAA    11700

CTGTCGAATC TTCACGCCAC CTCTACATCA CCCGTGTAGA AGGAGCAAGC CTAGAAGAAC    11760
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574

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GCAACCTCAT CATCCAAGAA TTGGCTAAAG CAGGAATTGC AAGTAATGTT CACTACAAAC    11820

CGCTTCCTCT CTTGACAGCC TATAAGAATC TTGGATTTGA TATGACGAAC TATCCTAAGG    11880

CCTATGCCTT CTTTGAGAAT GAAATTACCC TCCCTCTTCA TACTAAATTA AGCGATGAAG    11940

AAGTAGACTA TATCATTGAG ACTTTCAAAA CAGTTTCTGA AAAAGTGCTA ACTTTATCAA    12000

AAAAATGACA AACTACAGTC AAGCGAAAGT GATCCTGCCC CTAAAAAGTC TAATTGAGTG    12060

TAAAAACTGT TGTTTTCAAT TGATAATAGT TTACACCTGT AGTTGAGGCC CCTTTCTCCT    12120

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CAAGTCAGTA ACCTAGACTT AGGGCAAGGC GGCACTGACC TAGTTTGAAG AGATTTCCGA    13020

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TGATAAAGAT AATGACAGCG GTGTCATTCT ATCTATTTTA AGAAAAGTAA TAATCAATTG    13140

TTAAAAATAG TAAAAAAATT GGAGGTTCTG ATGAAATATT TTGTTCCG              13188
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(2) INFORMATION FOR SEQ ID NO: 71:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 32768 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

575

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AACGAGTGCA TCAGTCTCAG CAAGCACCAG TGCGTCGGCC TCAGCAAGCA CCAGCGCGTC        60

TGAATCCGCA TCAACCAGTG CCTCAGCTTC AGCAAGTACC TCAGCATCTG AATCAGCATC       120

AACAAGTGCA TCGGCTTCAG CAAGCACAAG TGCTTCAGCC TCAGCAAGTA TCTCAGCGTC       180

TGAATCGGCA TCAACGAGTG CGTCCGCTTC AGCAAGTACT AGCGCCTCAG CATCAGCGTC       240

AACAAGTGCT TCGGCTTCAG CGTCAACGAG TGCGTCTGAG TCAGCATCAA CGAGTACGTC       300

AGCCTCAGCA AGCACATCAG CTTCTGAATC TGCATCAACC AGTGCGTCAG CCTCAGCATC       360

GACAAGCGCC TCAGCTTCAG CAAGTACCAG TGCGTCAGCC TCAGCAAGTA CCAGTGCTTC       420

AGCCTCAGCG TCGACAAGTG CGTCGGCCTC AACCAGTGCA TCTGAATCGG CATCAACCAG       480

TGCGTCAGCC TCAGCAAGTA CTAGCGCCTC AGCCTCAGCA TCAACGAGTG CGTCCGCTTC       540

AGCAAGTACT AGTGCATCAG CATCAGCATC AACGAGTGCA TCGGCTTCAG CAAGTACCAG       600

CGCCTCAGCT TCAGCAAGCA CCAGTGCGTC AGCCTCAGCA AGTACCAGCG CCTCAGCCTC       660

AGCAAGCACC AGTGCCTCAG CTTCAGCAAG TACCAGTGCG TCAGCCTCAG CGTCGACAAG       720

TGCGTCGGCT TCAGCAAGTA CCTCAGCGTC TGAATCAGCA TCAACGAGTG CATCAGCTTC       780

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AGCGTCAACG AGTGCGTCTG AGTCAGCATC AACGAGTACG TCAGCCTCAG CAAGCACATC       960

AGCTTCTGAA TCTGCATCAA CCAGTGCGTC AGCCTCAGCA TCGACAAGCG CCTCAGCTTC      1020

AGCAAGTACC AGTGCGTCAG CCTCAGCAAG TACCAGTGCT TCAGCCTCAG CGTCGACAAG      1080

TGCGTCGGCC TCAACCAGTG CATCTGAATC GGCATCAACC AGTGCGTCAg CCTCAGCAAG      1140

TACTAGCGCC TCAGCCTCAG CATCAACGAG TGCGTCCGCT TCAGCAAGTA CTAGTGCATC      1200

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CACCAGTGCG TCAGnCTCAG CAAGTACCAG CGCCTCAGCC TCAGCAAGCA CCAGTGCCTC      1320

AGCTTCAGCA AGTACCAGTG CGTCAgCCTC AGCGTCGACA AGTGCGTCGG CTTCAGCAAG      1380

TACCTCAGCG TCTGAATCAG CATCAACGAG TGCATCAGCT TCAGCATCAA CAAGTGCTTC      1440

AGCTTCAGCA AGTACCAGTG CGTCGGCTTC AGCATCAACG AGTGCTTCAG TCTCAGCGTC      1500

AACCAGTGCC TCTGAATCAG CATCAACAAG TGCCTCGGCT TCAGCAAGCA CCAGTGCGTC      1560

GGCTTCAGCA AGTACTAGTG CATCGGCTTC AGCATCGACA AGTGCGTCTG AATCGGCATC      1620

AACGAGTGCT TCGGCTTCAG CATCAACGAG TGCGTCAGCC TCAGCAAGCA CATCAGCTTC      1680

TGAATCTGCA TCAACCAGTG CGTCCGCTTC AGCGTCAACC AGTGCGTCGG CTTCAGCGTC      1740
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576

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GACAAGTGCT TCGGCTTCAG CATCAACGAG TGCGTCGGCC TCAGCAAGCG CAAGTACCTC    1800

AGCGTCAGCt TCCGCCTCAA CCAGTGCGTC GGCTTCAGCA AGCACAAGTG CGTCAGCCTC    1860

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TACGTCAGCC TCAGCAAGCA CATCAGCTTC TGAATCTGCA TCAACCAGTG CGTCAGCCTC    1980

AGCATCGACA AGCGCCTCAG CTTCAGCAAG TACCAGTGCT TCAGCCTCAG CGTCGACAAG    2040

TGCGTCGGCC TCAACCAGTG CATCTGAATC GGCATCAACC AGTGCGTCAG CCTCAGCAAG    2100

TACTAGTGCA TCAGCTTCAG CATCAACGAG TGCATCGGCT TCAGCATCAA CCAGTGCCTC    2160

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577

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TGCGTCAGCT TCAGCATCAA CCAGTGCTTC GGCTTCGGCA TCAACAAGTG CCTCAGCATC    5220

AGCATCAACG AGTGCGTCAG CCTCAGCAAG TACTAGTGCA TCAGCATCAG CATCAACCAG    5280
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578

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TGCATCAGCC  TCAGCAAGTA  TCTCAGCGTC  TGAATCGGCA  TCAACGAGTG  CATCAGCATC     5340

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GAAGTCAGTC  TCGCCAACGG  TCAAGCTAGT  GGTTTATCTG  ACACAGCAAC  GTATAAAGAG     7020

TTTGAAATGA  AACAAAGGCT  TTTAAATCAG  CTATCGAGAC  AAGAGGAAAG  TGAAAAGAAA     7080
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579

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GTAACTTCTG AGCAAATTTC ATGTTATAAA TCGGATATTA GTTACACAGT CTTTTTACGC   7320
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AAACCGTGGA AAGATTTGGC GGCCCAAACC TATCGTGAAG TTTGGTGGTA CTATCATGGG   7800
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580

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581

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582

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583

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584

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585

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586

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587

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588

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591

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AGACTCCAGA TATGAAATCC GCTCAAGTGA AAAGCTAGAA CACCGATAGC CAGAGCTAGA    29160
AGCATAGAAA AAAGACGATT GCGAGCCAGT TTTAAAGTAC TTCTACGCGT ATCAGATAGG    29220
CTCAAGAGAG CGATAATTCC AGCCGAAACT GCTGACGAAA GATTGAGAAA ATAAGCAAGC    29280
AGGCAGGCAA GACAGGTAGC TAAGATGAGC TTGGTCGTAC GTTGGCTAAT AGACATAAGA    29340
ATTTCCTAAT AAGTTAGAAT AAAAGCGTAA AAGACAAGAC ATGAGCAGGC TTGCCTTGAT    29400
GAGTTATTTT TTACGGGTTG CTGCGTATTC GGCAACGGCG GTAAAGAGGA CATCTGTAGA    29460
AGAGTTAAGG GCTGTTTCAC ATGAGTCTTG GATGACACCA ATCACAAAAC CAACCCCAAC    29520
AATTTGTATG GCAATATCGT TAGAAATACC GAAAAGGCTA CAAGCAACTG GGATAAGAAG    29580
GAGGGAACCT CCGGCAATAC CTGAAGCATC ACAGGATGAG ATAGCTGCTA CCACACTGAG    29640
GACAAAGGCT GTGGCAAAGT CAACAGGAAT TCCAAGAGTG TTAACTGCAG CAAGGGTCAA    29700
AAGGTTAATG GTAATCGCTA CTCCAGCCAT ATTGATAGTA GAACCGAGTG GGATAGAAAC    29760
AGAATAGGTA TCTGGGTTGA GTCCAAGGTC ATGGCAGAGT TTCATGTTGA CAGGAATGTT    29820
AGTCGCAGAA CTACGAGTGA AAAAGGCTGT CACACCGCTG ACACGGAGGC AGTTCCAAAC    29880
TAGAGGGTAA GGATTGCGTC TCATAAAGAA GAAGGCAATC AAAGGGTTGA CCACAGGGGC    29940
AACAAAAGC ATAGTCGTTA CTAATAGAAC CAATAAAATA CCGTAGTTGG CAAGGCTTCC    30000
GACTCCCTTG TCAGAAATGG TTTTAAAAAC AAGACCAAGG ATTCCAAATG GAGCCAGATT    30060
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GATGATCCAT TCGACAATTT TAGAAGTCAC GTCAGCGATA GTTTTTAGCA ATTCTTGACT   30120

ATTTTTACTG GCTTCTCTCA TAGCGATTCC AAAAATGACT GCCCAAGATA AGATTCTAAT   30180

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CATAGGATAT ACAAGAAAAC AACAGTTTTC ATATTGCTAT CTTGTCCCTT TTGATGTTGG   30420

GAAAGGGCAT TGGCAACGAG AGCAAAGACT AGGATAGGAG CAACAGCTTT TAGACCTCCA   30480

ACGAATAAAT CCTCGAGTAG CCCAATCCCT GAGAGATTAG GAAGGGTCAG TCCTAGGATT   30540

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ACTCGTTATC TGGAGAACCA TGACACGCTT TCGATTTATA AGTTTCTCTT TGCCAGTCTG   31740

GAAATCATCA GCAATGCCTA CTATCCTGTC ATTGAGCAGA TGGACAAGAG TAGGGATGAG   31800

GTCAATGACC TCTTGCGCCA GCGAACTACC AAGAAAAACC TCTTTGTCCT GTCTGATTTG   31860
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ATACCCTCAT TGCTTGGAAC AACCCTGATG GAACGCCAGA GATGAAGCAA TGGCTACATG    32460

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AACGAGCAGT TGAGAAATTT GGGATTGATT ACGTTTACTG GGCCTTGAAG CCCTTCACAT    32580

TTGGTATTGA CCGTGCTATG AAGGAATTCC ACTATGACAA AAAGGAAGTG GTCATGGTTG    32640

GTGACCAACT CATGACAGAT ATACGAGCAG CCCACCGTGC AGGGATTCGG TCAATTTTAG    32700

TCAAACCCTT GGTCCAACAT GACTCAATCA AAACGCAGAT TAACCGAACT CGTGAGCGTC    32760

GTGTTATG                                                             32768
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(2) INFORMATION FOR SEQ ID NO: 72:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 14872 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

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CCAGTCACAA AGAAATTGAG CGCGTTCAGc TGAGGATGCA CTATGATGCA AGCTACATTT     60

CATTTGATGG GATATTAAGA AAGGAGATTT TCATGACACT TTTAGATGTA AAACACGTTC    120

AAAAAATTTA TAAAACACGT TTTCAGGGCA ACCAAGTAGA AGCCCTCAAG GATATTCACT    180

TTACCGTAGA AAAGGGTGAC TACGTTGCCA TCATGGGTGA GTCTGGTTCT GGTAAATCAA    240

CTCTTCTCAA TATTCTAGCT ATGTTGGATA AACCAAGTCG TGGTCAGGTT TACTTGAATG    300

GAACTGACAC CGCAACTATT AAAAATTCAC AGGCTTCTAG TTTCCGGCGT GAAAAGCTAG    360

GATTTGTCTT CCAAGACTTT AACTTGCTAG ATACTCTGTC TGTTAAGGAC AATATCTTGC    420
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594

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TTCCGCTTGT CTTGTCAAGA AGACCTATAA CGGAGATGAT GAAGAAATTG GTGGTGACAG    480

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AGAAACAGCG TGTAGCAGTA GCCCGCGCCA TCATCACAGA ACCTGAAATT CTCCTTGCGG    600

ACGAGCCAAC AGGAGCCCTT GATTCCAAGT CATCTGCAGC CTTACTTGAT GTCTTTAATG    660

AAATCAATGA GCGTGGGCAA ACCATCCTCA TGGTAACCCA CTCAACAGCA GCTGCTAGCA    720

GGGCCAAGCG TGTTCTCTTT ATCAAAGACG GCATTCTTTA CAACCAAATC TACCGTGGAG    780

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CCCTTACGGT AACCGATCCT CTTACAGCCC TAACAACTTT CTTCCTAGCT GTTTTGCTGG   1560

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TCTTGAGCCA GTTTGCAAGT GACAAAGGTT ATAGTGTCAA AGAGAAAGAA GTACTTCGTT   1920

ACAGTAACTT TGGTATTGCA AATCAAGAAG GAACCAAGTT AACTATTTTT GAAAAAGGAC   1980

AAAACCGTGT CCAACCCACA ACAGTTTTCA TGGTATTTGA CCAAAAAGAT TATGAAAATA   2040

TGACTGGTCA AAAACTGTCT CTATCAGGAA ATGAGGTCGG TCTCTTTGCC AAAAATGACG   2100

GACTGAAAGG ACAGAAAGCT CTAACTCTAA ATGATCATCA ATTTTCTGTC AAAGAAGAAT   2160

TTAATAAAGA TTTCATTGTG AACCATGTTC CAAATAAGTT TAATATCTTG ACTACTGATT   2220
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595

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TCTATAATCA GTTTTACGGT GGTATGAATG TAAATGTCAG TGAAGAAGAA CAACTCAAGG    2340

TCGCTGAGGA GTATGAAAAC TACCTCAATC AATTTAATGC TCAATTAGAC ACAGAAGGTA    2400

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TCTGCCGTGA TGGAAAGAAT CTTGTGTTGT TTTAAGATGA GTTTTAGAGC CTGATTGACC    3900

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596

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TCTACTGGGT TATCCACGAA CTTTTTGCCT TGTTACCTTA GACGAGATAA AACGTCTATG    7500
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598

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TCAAGCGATT GGAGGAAATG AACTAATCCA CAGTGGCTTA TTCCAAGTAT ACCACTTGGG    7620

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599

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GAAATTGTTC CAATTCAATT TTTGAAAGCC TTGCTTCCAG ATCCTGCCAG TCTTGGGCCA      9480

CGTACAGTCG GAAAAACCAA TATTGGATGT ATCTTTACAG GTGTCAAAGA CGGTGTCAAA      9540

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TAGTCTTTAA CTCAGAGAGA CAGTTGCGTA AACACGGTCC GCGTTGTCGA GAGGCTGGTG     10140

TCAGTGTTGG TTTGCGCCTC AACCCTCAGT GTTCAACTCA AGGcAGATCA CGCGCTCTAT     10200

GACCCTTGTG CACCAGGTTC TCGCTTTGGA GTTACTATAG ACAAGATTCC GAGTGATTTG     10260

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TCAGAAATCA AGCGTATCCG AAAAACTTAC AATCTTGAAA TCTATATCGA GCCTGGTGAA     10500

GCCATTGCGC TTAATGCGGG TTATTTAGCA ACTGAGGTAT TAGATATTGT AGAAAACGGT     10560

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CCCTATCGTC CACCTTTGAG AAATGGCTTT GAGTCACAGG AAAAAGCCCA TACCTACAGA     10680

CTTTCTTCTA ATACCTGTCT GACGGGCGAT GTGATTGGTG ATTATAGTTT TGAAAATCCA     10740

GTCCAAATCG GAGACAGACT TTATTTTCAA GACATGGCCA TTTATTCTTT TGTCAAAAAT     10800

AATACCTTTA ATGGTATTGG ATTGCCAAGT CTCTATCTCA TGGACGAACA GGGAGACTGT     10860

AGCTTACTCA AAGCTTTTGG CTATCAAGAC TTTAAAGGGA GATTATCATG ATGGACAGTC     10920

CAAAAAAATT AGGCTATCAC ATGCCAGCAG AGTACGAACC CCATCATGGT ACCCTCATGA     10980

TATGGCCGAC TCGACCAGGA TCATGGCCTT TTCAAGGAAA GGCTGCTAAA AGAGCATTTA     11040
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TAGCTACTTA TGACCTAGAC AAAGGGAGCAA GTGAACGCCT AAACTGGGGC TTGTTTCGAG   12840

601

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GCTTGTGGGA TTTCCTTGGC TTCATTGAGG AGGGTGCCGT CCATATCCAA GGCTAGTAGT    13860

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TCCTAATGGT AGGTACGATT GGGAAATAGA ACCAGTATTA ACTCTGCTGG TTCATGGATT    14280

TTGTCCCAGA GGCACCTATG ATTCAGGATA TATTGGAGGA GGTAATCATC TTTGCAAAGG    14340

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TACAAATCAA CTTGGTTTTG GAGGCTTTTC AATTATCTCG CAAAGCCCTA TCTACCAGCA    14520

AGTCGTGAAT TTTTTCAGAT TCTGCTTTTG ATGGAGAGCG GAGTTCTTTT CTTAGCGGTC    14580
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602

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TTCATCTACC TTTTACTGGG CTACATCATT TCATATATGT CTGACTTCCT CTTTTCGTAT    14700

TTCATATCCC TGTCTTCAAA TCAGATTTCT TTGAATGAAA CGGTAGAAAT GATGGGGAGA    14760

CAGGAGTTCC CTTATGTCTT GCTCATCGTT TGCTTCATCG CCCCTATTGC TGAGGAATTG    14820

ATTTATCGAG GtGTGCTTAT GACAACCTGT TGCAAAAACT CACCTTGGTA CG            14872
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(2) INFORMATION FOR SEQ ID NO: 73:

       (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 10223 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

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TCTTCTTGGA GCCATCTGCT GGATTGCCAT CATCCTCACC ACTCTTGGTA TGCAGACCCT     120

TATCGGCATT TTCTAATACT CTTCGAAAAT CTCTTCAAAC CACGTCAACG TCGCCTTGCC     180

GTAGGTATAT GTTACTGACT TCGTCAGTTC TATCTGCAAC CTCAAAACGG TGTTTGAGCT     240

GACTTCGTCA GTTCTATCTG CAACCTCAAA ACGGTGTTTT GAGCTGACTT CGTCAGTCGT     300

ATCTACAACC TCAAAACAGT GTTTTGAGCT GACTTCGTCA GTTCTATCTG CAACCTCAAA     360

ACAGTGTTTT GAGCAGCCCG TGGCTAGTTT CCTAGTTTGC TCTTTGATTT TCATTGAGTA     420

TAACACAAAA GGTAGCCCAT CAGCTACCTT TTTCTTATGC TTCCTCAATC AAGCGAGTAT     480

GTTCTCTCTT GATACAGCGA TTCATCACGA TATCATCACA TCCACCATCA CGCAAAATCT     540

CTTTCGCTTC TAAACTTTCA AGTCCTAGCT GTGCCCAAAA AATCTTGGCA TCAGCTTTGA     600

GAAAATCACG CGCCACATCG GGCAGAAATT CACTGCGACG ATAAACATTG ACAATATCTA     660

CAGGAAAAGG AATTTCAGCG AGGCTAGCAT AAGCCTTTTC ACCCAAGATT TCGCCACCTG     720

CCGCCTTGGG ATTGACTGGG ATGATTTTAT AGCCCCGAGC CTGCATTTCC TTTGTTACTC     780

GATTGCTGGT TGTTTCTTCA CGGTCAGACA AACCCACCAC AGCAAGGGTT TTACTCGTTG     840

CGAGATACTG ACGAATCACG CCATCACTTG GATTGATAAA TTCTTGACTC ATAGAAATCC     900

TCCTTTTTCA TCAGTATAGC ACATTTTGAA AAGGTTTGCA GAATTATACT ACAAAAAAGG     960

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TAAGAGGAAC ACTGAGTTGA ATGGCTTCTT CCATGGTTTG TTTCACCAAT TTTTTCATCT    1080

CTACCAATTC AGATTTAGGC ACTTCAAGGA CGATTTCATC GTGCACTTGT AACAGCATCT    1140
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603

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TAGTCTGATA ACCACCTGCA ACCAAGGCTT TATCCAGCTG AATCATGGCA ATCTTGAGAA    1200

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TATTGAAGTT GCGCGAATTG ATATCTGGCA ACTCACGGCG ACGCTTAAAG AGGGTCTCTA    1320

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TAGACAAGCC AAAGTCTGAA ATCCCATAAA CCACTCCAAA GTTAACTGCC TTGGCATTGC    1500

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CAAAACGTTG CAAAAGAACT TTAACCTTCT TAAAGTCATA AACTCTCAGA GATGTTTTTT    2520

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604

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CAATATTTTC ATAAATCCCC TCAAGCGAAC CATGCTCCAG CAAGAGCTTA ATACCCGTCT        3000

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GCAAGTATTT TTCAAACTTT TTCCGAATAA ATAGATAGAG CCAGAGAATT TAGTAAACCT        3720

AGATTTAAAA ATGTGCTATA ATATAGTATA TTGAATCTAT AATAGTACAC CTTGACTGCT        3780

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605

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606

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CTAGACCTGA AAAAGTCCAG TGAGAGGCAA TTCCTGAGAT GATACGCTCT AAAATTCGCG    6720

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607

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AAGTCCTGTC GTAGTACGCT TGGCATTTCC AAACATGGTC GGTGTTACCA AAGCCTGAAC    8280

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GTTGGGGCAA CGTCCCAGAT ATTTAGGGGA ATTATACCCA CAATTTTGAC ATACAAATGT    9180

CGCTTTTTTC TTTGCGATGA CAAACCTCTT TCTATATCTC TAACTCACAC TCAATCACTT    9240

GGCAAAAATC AATCTTCTCA TTTGGCACAA ACTGGCGCAT GAGCATTCGA TGAGCAACAA    9300

CTACCACAGT CTGATGTTCT CGATACTTAG ACATACATTC TAGAAACCGA GACTTCATTT    9360

CCGTAGCTGT CTCATATTGA ATAGGACTAT TAGGAAGCAA CTCCCCCTTG TTTTCTAAAA    9420

ACAGTCTTCT AGCTGTTTCA AAGTTTTCTA TTCCTGTTTT ATAGACCTGC CATTCATGTA    9480

ATAAAGGCTC TACTCTTAAA GGAAGACCCG TAGCACAGAC CACATACGAA GCCGTTTCTA    9540

AAGCTCTTGT GACTGCAGAA GATACGATTA TTTCAGCTGA CGAGAGTAAA GGATTTTTGC    9600

TCAATTTCTG GACTTGCTGC CGTCCCATCT CAGACAAGGG TGCCAAATCT ATCCCAAATC    9660

CTATATAAGA ACGCTCCTCT AACTCACGGT AATCTGGCTC CCCATGACGT ACAAAGATAA    9720

TCTTCATTCT AGTGCCCTGT CGATCCAAAT CCACCAGTTC GAACGCCATC AGCTGCATCT    9780

CCATCTGCAA TTAAGAAAGT AGCAAAAACA GCCTGGACAA TACGCTCCCC AACTTCAAGA    9840

ACAACCTCTT GGTCTGTGAT ATTCTTCATC TGCGCAAAAA TATGCCCTTC ATTTCCAGGA    9900

TTTCCATAAT AATCCCCATC AATGACTCCA ACTGAGTTAA TTAAAACCAA GCCCTTCTTA    9960
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608

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CGAGGATTTG AAGAACGATC ATAGAGGTAG AGAACCTCAG TCGGCTGCAT ATAAGCCTTA      10020

ACCCCTGTCG GAACCAAGAC AATCTCTCCT GGCGCAACAA CTGTACGCAC AGCAACCTTT      10080

AAGTCGTAAC CAGTCGCATG CGCTGTCTCA CGCTTGGGCA ATAAATTTTC ATCTGTAAAA      10140

CTCGAAACCA ATTCAAAACC ACGAATTTTC ATAATTTTCT CTTTTCTATT ATCATTTATT      10200

CTAGATTATT CTATACTTAT TTA                                             10223
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(2) INFORMATION FOR SEQ ID NO: 74:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16535 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

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TGGTTCTGTC CTTATCGGCG CCTTGTCTTG CTTGCCATGG CTACACCAAC TATCTCATCC        60

GACGAAAGTA CACCAACCAC TAACGAACCC AACAACAGAA ATACAACCAC CCTTGCCCAA       120

CCTCTTACTG ATACAGCAGC TGGCTCTGGT AAGAACGAAA GTGATATTTC TTCACCTGGA       180

AATGCAAACG CTTCCCTAGA GAAAACAGAA GAAAAACCTG CTGCAAGCCC AGCCGATCCA       240

GCACCACAAA CTGGACAAGA TCGTTCAAGT GAGCCAACTA CTTCTACTAG TCCAGTAACA       300

ACTGAAACTA AGGCAGAAGA GCCCATCGAA GATAACTACT TCCGTATCCA TGTCAAAAAA       360

CTTCCTGAAG AAAACAAGGA TGCTCAAGGA CTATGGACTT GGGACGATGT TGAAAAACCA       420

TCTGAAAACT GGCCAAACGG AGCTTTGTCC TTCAAGGATG CCAAGAAAGA TGACTACGGC       480

TATTACCTAG ATGTCAAATT AAAGGGAGAA CAAGCCAAGA AAATTAGCTT CCTCATCAAC       540

AATACAGCTG GAAAAAATCT AACCGGCGAT AAATCTGTAG AAAAACTAGT TCCAAAAATG       600

AACGAAGCTT GGTTAGACCA AGATTACAAG GTTTTCTCTT ACGAGCCACA GCCTGCAGGA       660

ACTGTTCGCG TCAACTACTA CCGCACAGAT GGCAACTATG ACAAGAAATC TCTCTGGTAC       720

TGGGGAGATG TGAAAAATCC AAGTAGCGCT CAATGGCCTG ACGGAACAGA CTTTACGGCT       780

ACAGGCAAAT ATGGCCGCTA TATCGACATT CCTCTTAATG AAGCCGCAAG AGAATTTGGA       840

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AAGTTCACAG ATTTGAAAAA TCATAGCCAA ATTTTCCTAA AAGACGATGA TGAATCGATT       960

TACACAAATC CATACTATGT CCATGATATC CGTATGACAG GAGCCCAACA CGTAGGCACT      1020

TCTAGCATTG AAAGTAGCTT TTCAACACTT GTCGGTGCTA AAAAAGAAGA TATCCTCAAA      1080

CACTCCAACA TCACTAATCA CCTAGGAAAC AAGGTAACTA TTACCGATGT TGCAATCGAT      1140
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GAAGCTGGTA AGAAAGTGAC CTACAGCGGA GATTTCTCTG ACACAAAACA TCCTTATACT    1200

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TACAGCTATG ATGGCAAACT GGGAGCTGAC CTAAAAGAAG AAGGAAAACA AGTTGATTTG    1320

ACCCTTTGGT CACCAAGTGC TGATAAGGTT TCTGTTGTTG TCTACGACAA GAATGACCCT    1380

GACAAAGTAG TTGGAACTGT CGCTCTTGAA AAAGGGGAAA GAGGAACTTG GAAACAAACT    1440

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CTCAAAGACT TGGGTGTAAC CCATATCCAG CTCCTTCCAG TCTTGTCTTA CTACTTTGTC    1860

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AAGGTTCCAA ACAAATCTCA CTTGTTGCGT GATAAGGACG GCAACCCATT TGACTATCCT    2880
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ATTGCCCTTC GTCAATCTAC AGATGCCTTC CGACTTAAGA GTCTTCAAGA TATCAAAGAC    3060

CGTGTCCACC TCATCACTGT CCCAGGCCAA AATGGTGTGG AAAAAGAGGA TGTAGTGATT    3120

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AAAGATTCCG TGAAAGAGCC CCTTCCAGCC ATAATCTCCG ATCGTCCATT TGACAAAGCA    4620

TCGATAGTGG CATACTGTTG GAACAAACGA ATCGGGTCCA TGCTTGACAG AATGCTGACT    4680
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GCACTGGTCA AACGGATTTT CTTGGTATTG ACTGCCCCAG CGGCCAGAAC AATCTCTGGG   4740

GCTGATACTG CAAAATCCGC CCGATGGTGC TCACCAATCC CATATACATC CAAACCAACC   4800

TTGTCAGCCA GCTCAATCTC TGCCACCAAC TGGCGAATGC GTTCAGCATG ACTGTAAGTT   4860

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GTCAACCAAG GCAAAGGCAT AAGAACCACG GATGATGTGA AGGGCTTTTT TGAAGGCTTC   6420

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ATCTGTCTGC CCCTTGAAGT GGTGACCTGC AAGGTATTCT TCCTTGATTT CAAGATAGTT    6540

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ATTGTCCTCA GTTGGTTTTC CGTGAGTAGC CCAACGAGTA TGTCCGATAC CAGTTGTTCC    6660

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TGGAAAAATC CGTGACCACT GAATAGAAGT CCGAAAGGCT GTGTGACCAG TCTCTAACAA    8220
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613

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AAGCTCAATA TCCCGCTCCC AATTTTCATA AAAAGTCGAT GTCTTATCTG AACCAATCCC    8280

ATTATAGTAA CGATTTGGCT CCACTTGGAA CCAGTAATCC CAGAGATTGT CTCCCTTACC    8340

GTCACCAGCT ACACGTCCTT CTGTCTGCGG TCCAGAAGTA GAGGATCCCC AGACAAAATC    8400

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AGCAACATAC TATCGAAACG ATCCAAAACA CCACCATGTC CAGGGATAAA TTTCCCAGAA    11760
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615

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CAGCACGTCC ACCATAGTTA AGAGCAAAAT TAAGAATCAA TCCTGTGTTG TTCTTAGTCA    12840

ATTCCTCAGC CTTGGTTAAA GCTTCAAAGG TTTGCTTAGG CAGGCGGTCT GTCTCCCCAA    12900

TCATTTGAAT CTTAACATTA TTCGCATGTA GTTCCGGGAC ATAATTATCA TAAAACTCTA    12960

CTGGCAAGTT CATGATAAAC TTGACTTCCT GATCTGGACG GGTCCAGTTT TCCGTAGAAA    13020

AAGCATAGAC CGTAATAACC TTGACGCCCA GTTTGTTGGC TGCCTTGGTC ACGGTTTGCA    13080

ATGCTTCCAT GCCCGCCTTA TGTCCAAAAA CTCGCGGTTG CATACGTTTT TTAGCCCAAC    13140

GGCCATTGCC ATCCATGATG ATGCCGATAT GAGCAGGAAC CTGTGTCGGA ACCTCTACTT    13200

CCACAGCCTT ATCTTTCTTA AAAAATCCAA ACATGATCTT ATTCCTATTC AAAAATCTAT    13260

CGTTTCATTA TACCATATTT CCCCATTTTC TTCTATCACT AAGCTATTTA TTCTCAGGCA    13320

CCAAGCCCAT TTTTCAAAAA AATAAGCCGC CTGATTGGGC GACTTTATTT TTATAGGGAG    13380

ATTATTATGA AAAAGTTTTA GGAGTTTAAG TTAAGGTCTT CTTAACTTAT GAACTTAGTG    13440

TACACTCCCT AGCTTAAAGT TTCCTTAAGT ATTTTTAAAA ATCAAATTTT TCCATTTCTC    13500
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616

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CTGCCAATTT TTCTTGGATA AACGTGTTTG ATAGAGTTCC ATTCGGTCTT CATTTTCTAA      13560

GAAATGAGGA GTTGGACGAA CTTGAAAATT CAAAATATCC TCCAAACCAT AAGGTACATA      13620

GAGTTCAAAA TCTAATTCTT CATTCAAGCG CAGTCCAACT GCCGTACACC GTTCTGGATA      13680

CTTACTCATA GCATCACGAG AACTGGTATA GGAAGCAGTG TGAGGACTGT GCTGATGCAT      13740

ATAGACCTGA TTTTTCAATT CCCACTGGTA CTGAGGAAAA TCCTCTCTCA GCTTTTTCTC      13800

CAGTAATAAG GTTTCCTCAT AAGAAAAATC TGGATCAAAG AAAATCACAT CTATATCTGT      13860

TTCATGATCA AAAGGGGATT TGTCTGACAA AAGATTCCAG ATGAAATTTC TGACAGAACC      13920

TGCTGCCAAC CACGAGTCTT TCAAACCAAG GTCTCGGATG ATCGTCAGAA TGGCCATCAT      13980

ATCTGGACTT TCTCTAAAAG CCTCTAAGAT TTCTTGCTTA TTTTTCACTG TATTCATAAC      14040

CTAAGTGCTC ATATGCCTTA GCAGTCGCCA CCCGTCCAGA CCGTGTCCGC ATGATAAAAC      14100

CTTTTTGAAT CAAGTAAGGC TCATACATGT CTTCAACTGT CTCACGCTCT TCGGCGATAT      14160

TCACAGAAAG AGTTCCTAGA CCAACAGGTC CTCCACTGTA CATCTCAATC ATGGTGCGAA      14220

GGATTTTTTG ATCCACATAG TCCAAACCTT CATGGTCAAC ATCCAGCATA GTCAAAGCCT      14280

TATCGGTAAT AACATCATCG ATAACCCCAT TCCCCATTAT CTGGGCAAAA TCGCGCACGC      14340

GCTTGAGGAG ACGATTGGCA ATACGAGGGG TTCCACGACT ACGTAGGGCC AACTCAGATG      14400

CTGCCTCATG GGTGATTTCC ATCTCAAAAA TATCTGCCGT CCGCTCGACA ATTTCTGTCA      14460

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CACTATAAAG CACTTCTTCC ACTGACATGG GTAAGCGATG AATCTCGTCA ATAAAGAGGA      14700

CATCTCCAGG CTCTAAATCA TTCAAAATCG CTACCAAATC ACCCGCTTTT TCGATAACAG      14760

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TTTTCCCAAG CCCTGGAGGG CCAAATAAGA GCACATGATC CAGCGCTTCA TCCCGCATTT      14880

TAGCGGCTTC GATAAAGATC TGAAGTTGAT CCTTAACCTT ATCCTGACCA ATATATTCAC      14940

GTAAATACTG AGGACGGAGC GTGCGTTCTA CTAACTCCTC ATCACCCATC ATCTCATTAT      15000

CTAAAATTCT ACTCATGGCT CTATTATATC AAAAAAAACA AGCCACAAAC AAAAAAGCCA      15060

CCTGATTGGG TGACTCCTAA GTTTAGCACT TATGTGGTAT AATATTATAC GGCACTTCTA      15120

CACCGCCTAC GAAAGGAGGT GAGATAGCCC ATGATGGAAT TAGTACTCAA AACTATTATC      15180

GGACCAATTG TGGTCGGTGT CGTTCTTCGT ATAGTCGATA AATGGCTAAA CAAGGACAAA      15240

TAGTGTCAAA AAAGACCTCA AGCTTATTTG GTCGTGAGCT TGGGGTCTTT TCTAGCCTAT      15300
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617

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GATATAGAAC TAGTACTCAA TTCCTTTTTA TTATCCCATA GTTCACGAAT TTTGTCAAAA        15360

CTTTACATTT TCTTCAACCG CTGTACGACA AGACGGTTAA GATTAAGAGA ACGTTAGGGA        15420

TTCTATCAAT TTCATAGAAA TTTTGATTTC GTAAACGAAG AGACAATCTT ACATGTCACT        15480

TCTCATTTAA TACGCCACTA CTAGACAAGC AAAATCATTA TTACAGTAGT TCCAGTCCTT        15540

CAATTAACAG TCACTTACAA TCAAATTGAG TTTGAACTAG CTGAAGCGAC CACAGACCTA        15600

TTTCTTAGTC ATATTCGCTA AAAAAATCCC CGCCAAAATC TCAAAAAGTC CCCGCCAATT        15660

CCCCGACCAA AATCCGAAAA ATACCGAAAA ATATCGAAAA ATTATTTTTA GAATAGTCCC        15720

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TATGAAAAAG AAAAGTTTAG GATTTTATTA AATAAAGTTA GGAGGTCTTT ATTTAATAAC        15840

TACATGATAC AAGACGAAAC TTAAAACTAG CTTAACTTTT CTAAAATTTT ACTATTTTGC        15900

AAAAAATTTC TATCACCAGC ACCTCACCAA TCGAGTAGGG GATAATCTCT AGCCCCTCTC        15960

ACACCACCGT ACGTGCCGTT TGGCATACGG CGGTTCAACT AACTTTTAAC GCATGTCGTT        16020

CAAGGTAATA ATCCAAACAC GAAACCAGTC CACGTTTTTC CAGGACTGGT TTTGATATAG        16080

CACGTTTAAG TACCGACTTC TGAGCTACTA ATTGATAATG GTCGCCCCAG CCAGATACCT        16140

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TCTTCCATTG CTTCCAGATA ATCACTCGTA GGCGAGTACG CAAGCGCTCA TCTATGCTGG        16260

CGACTATACT TTTCATATTT CCCAATGAGC AATAGTTTAT CCATCCTCGA ATAGACAAAT        16320

TCAGTTGCTC AATACGTCTT GTTAGGTCTA TACTCCATTT CCTCTGTGTT AGTTTCTTCA        16380

ATTTAAACTT AAATCTCCGA ACACTATCTT GATGTGGACG GCTTTTCCAA CCATCTGATA        16440

ATTTCCAGAA CCCAAAACCT AGATATTTCA ACTCTCTTGG TCATGTTTAC TTTCAAACCT        16500

AGCCGTTTCT CAATAAACGA CTGACTGAAT ACATC                                  16535
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(2) INFORMATION FOR SEQ ID NO: 75:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8136 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

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CCAGAGCGTT GCGTCCGAAA GTCTATCCAG ACACGGCTCT TTAAAAACAA AAGGAGAAAT        60

GATGCATACT TATTTGCAAA AGAAAATTGA AAATATCAAA ACAACCCTAG GTGAAATGTC       120
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618

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AGGTGGTTAC CGTCGTATGG TTGCGGCTAT GGCTGATTTA GGATTTTCAG GAACTATGAA        180

GGCTATCTGG GATGACCTCT TTGCCCATCG TAGTTTTGCC CAGTGGATTT ATTTGCTGGT        240

TTTAGGAAGT TTTCCTCTCT GGCTGGAGTT GGTTTACGAA CATCGTATTG TTGACTGGAT        300

TGGGATGATT TGTAGCTTGA CAGGGATTAT CTGTGTAATC TTTGTATCGG AAGGTCGAGC        360

.AAGTAATTAT CTTTTTGGCT TGATTAACTC TGTTATTTAC CTTATTTTGG CCCTACAGAA       420

AGGCTTTTAT GGTGAGGTGC TGACGACACT TTACTTCACA GTCATGCAGC CAATTGGACT        480

TCTAGTTTGG ATTTATCAGG CACAGTTTAA GAAGGAAAAG CAGGAGTTTG TCGCGCGTAA        540

ACTGGACGGC AAGGGCTGGA CAAAGTATCT TTCCATTAGT GTGCTTTGGT GGTTGGCCTT        600

TGGCTTCATT TATCAGTCTA TTGGTGCCAA TCGTCCCTAT CGTGATTCAA TCACAGATGC        660

AACCAATGGG GTAGGGCAAA TCCTCATGAC AGCTGTTTAC CGTGAACAGT GGATATTCTG        720

GGCGGCTACC AATGTCTTTT CAATCTATCT CTGGTGGGGA GAAAGCCTGC AAATTCAAGG        780

GAAATATCTA ATTTATCTCA TTAACAGTCT AGTTGGTTGG TATCAATGGA GCAAGGCAGC        840

TAAGCAGAAT ACTGATTTAC TTAACTAGGA AAAGATGTTT GAAAGTGCTG TTTTGAGATT        900

TCGATTAAAA CAGATATAGT TGATAATCAA GGATTTATAG TATGAAAAAG AGGATCGGCG        960

GGTCCTCTTT TGTTGTTGAA AAGATAAAAA ACTCAGTAAC CTAGAAATAA GACAACTGAA       1020

GCTTTACTCT ATATTCAATT TTTAGGAATG AGAAGGTCTA GATAAAATTG GACAACTTCC       1080

TGGTCTGTGA AATCTTGACC TTTTTTGAGC CACCAGGTCA ATGTCTCGAT AAAGTTGGAC       1140

ATGACCAAGT GTTGGAGGTA AGAAGTAGGC AGATTAGGGT GGGCTTCTTT TAAATTATCA       1200

GCTAGCACGG AATAGACATG GTGTTCTAGC TCTTTATGGA GTTGACGGAG GAAGTAGTCA       1260

TTTTTGGAAA ATAGCAGACT GGTGATATGG TCTTGGTTTT TATGAAAATG GAGAAAGAGG       1320

TGGGCGAGGT AGTCCTCGGT TGAAATGGCT TGCTCTCTTT CAAAAAGATG ATGGAAGAGG       1380

TAGCGGCAGA GCTGGTCCAG AAGAAGCTCC TTACTCTCAT AGTGACAGTA AAAGGTGGAT       1440

CGTCCCACAT CTGCGAGATC AATGATATCC TGAACAGTAG TGGCCTCGTA GCCCTTAGCA       1500

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ATTATAACAA AGGAATGAGA AATATGAAGG CAAAATATGC TGTTTGGGTG GCTTTTTTCT       1740

TAAATTTGAC TTATGCCATT GTTGAGTTTA TTGCAGGTGG AGTATTTGGT TCTAGCGCTG       1800

TTCTTGCTGA CTCTGTGCAT GACTTGGGAG ATGCGATTGC AATTGGAATA TCAGCTTTTC       1860

TAGAAACAAT CTCCAATCGT GAAGAAGACA ATCAGTACAC CTTGGGCTAT AAGCGGTTTA       1920
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619

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GCCTGCTAGG AGCCTTGGTA ACAGCTGTGA TTCTCGTAAC GGGCTCTGTT CTAGTCATTT    1980

TGGAAAATGT CACGAAGATT TTGCATCCGC AACCAGTCAA TGATGAGGGG ATTCTCTGGT    2040

TAGGAATTAT TGCGATTACT ATCAATCTGT TAGCGAGTCT GGTGGTTGGT AAGGGAAAGA    2100

CAAAGAATGA GTCTATTCTG AGTCTGCATT TTCTGGAAGA TACGCTAGGG TGGGTAGCTG    2160

TTATCCTGAT GGCGATTGTT CTTCGATTTA CGGACTGGTA TATCCTAGAT CCTCTTTTGT    2220

CCCTTGTCAT TTCTTTCTTT ATTCTTTCAA AAGCCCTTCC ACGTTTTTGG TCTACACTCA    2280

AGATTTTCTT GGATGCTGTG CCAGAAGGTC TTGATATCAA GCAAGTAAAG AGTGGCCTGG    2340

AGCGATTGGA CAATGTGGCC AGCCTTAATC AGCTTAATCT CTGGACTATG GATGCTTTGG    2400

AAAAAAATGC CATTGTCCAT GTTTGTCTAA AAGAAATGGA ACATATGGAA ACTTGTAAAG    2460

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CAGAATATAT TCGCTTCCAC TATGCAAACT GGGCGCTGGT TAAAATCCCT GGTCAACCTT    3600

CTGACTATAC AGAAGGGATG CTCAAGTCCC TTTTGACTCT TGCAGATGTC ATGCCGACAG    3660
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TTGTTGCAGA ACGTGGTCAA GAAGGAATTA CCAAGGTGCG TGAAATCCTC GGTGGAGGAG     3900

CAGATGCAGC ACTTGAATGT GTTGGTACGG AGGCTGCTAT AGAACAGGCG CTAGGTGTTC     3960

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GTTCGACATT TATGCAAAAT ATCTCTGTAG CAGGTGGGGC AGCTTCTGCT ACAACATACG     4080

ATAAGCAATT TTTACTAAAA GCCGTCCTTG ATGGTGATAT CAATCCAGGT CGCGTCTTTA     4140

CTTCAAGTTA TAAACTGGAA GATATCGACC AAGCCTATAA AGATATGGAT GAACGTAAGA     4200

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CCTGCTCGGC CCATTTCTTC AGTATAAACT GTAATACTAG AGAGGGGAGG ATAGACCTGT     4440

TTGGTCAGAC TAGTGTCGTT AAAGGAAATG AGGCTGACGC GATCTGGCAG GCTGATTCCA     4500

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TCTAGAAATA CAAGAGGCTT TTGGTATTCT TCAAAGGCAG AAATCTGAGC TCGACTAAAC     4920

TTTCCGATGC AGAGAATCCC AATCACTTCC TCGCTTAGGG TAAAAGGGTG GTCATTAAAA     4980

TAGCGCAAGA TATCATAGTC CAACTCTTGG GCTCTTTTTT CTATTCCTAG GCGAATCTGG     5040

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TAAAATTTTA GTAAAAAGGA TTGACCTTGG AAAATTCCTT GGATATAATA GAAAGAAAAC     5400

GATTACACGT TAAGATGGCT TAACGGACAG TCAAAGGAGA ATTCATATGG CACAACATCT     5460
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621

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TACTACTGAA GCCCTTCGCA AAGACTTTCT TGCTGTTTTT GGTCAAGAAG CAGATCAAAC        5520

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AGTCTTGCGT TTCTACTCAG CTAACTTTGA GGACAAGGGC ATTATCGAAG TGCCTCTCGC        5700

TGACCTCAAG TTTGAAAAAG AGCACAACTG GACCAATTAT CCAAAAGGTG TCCTTCATTT        5760

CTTGCAAGAA GCTGGGCACG TGATTGACAA AGGTTTTGAT TTTTATGTTT ATGGAAATAT        5820

TCCAAATGGT GCTGGCTTGT CTTCTTCTGC ATCCTTGGAA CTCTTGACAG GAGTCGTGGC        5880

TGAGCATCTC TTTGATTTAA AATTAGAGCG TCTCGATTTG GTTAAAATCG GCAAACAAAC        5940

AGAAAACAAC TTTATCGGAG TAAACTCTGG CATTATGGAC CAGTTTGCTA TTGGTATGGG        6000

GGCAGACCAA CGTGCTATTT ACCTAGATAC TAATACTTTA GAATACGACT TGGTGCCACT        6060

TGATTTGAAG GACAATGTCG TTGTTATCAT GAACACCAAC AAACGCCGTG AATTGGCGGA        6120

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CCTCAAAGCT CAAGTAGCAC TCCAAGCAGG AGATTTGGAA ACATTTGGAC GCTTGATGAA        6360

TGCGTCACAC GTTTCTCTGG AGCATGATTA TGAAGTAACT GGTTTGGAAT TGGATACCCT        6420

TGTTCACACA GCTTGGGCAC AAGAAGGAGT TCTCGGTGCT CGTATGACAG GGGCTCGTTT        6480

TGGTGGCTGT GCCATTGCCT TGGTTCAAAA AGATACTGTT GAGGCCTTTA AGGAAGCTGT        6540

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GCCTGAAAAA GATCCCAAAG AGATTGTGGC AGCCAAGTTG GTGCAAGCTA GTAATTATCC        7140

TCAGTGTCAG CTTTGTCTAG AGAATGAGGG CTACCATGGT CGAGTTAACC ACCCAGCTCG        7200
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TAGCAATCAC CGTATTATCC GTTTTGAAAT GGTTGGTCAG GAATGGGGTT TCCAGTATTC    7260

GCCCTATGCT TACTTTAATG AGCATTGTAT CTTTTTAGAT GGCCAGCATC GTCCCATGGC    7320

CATTAGTCGT CAGAGTTTTG AACGTCTGTT GGCTATCGTA GACCAGTTTC CAGGATATTT    7380

TGCTGGATCT AATGCCGACC TGCCGATTGT GGGGGGCTCT ATTCTAACTC ATGATCATTA    7440

TCAGGGAGGC CGTCACGTAT TTCCTATGGA ATTGGCTCCC TTGCAAAAGG CCTTCCGATT    7500

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CCAGTATTCA GATCCTGCAG TGCAGATTTT GGCAGAGACA GACAGGACAC CGCATCACAC    7680

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TCTGAAAGAA GAAGTGGAGC AAGTCGCTAG CTATCTTGTA GGAGAAGCTG TTACAGTTGC    7920

CGATTATCAT CAGGAGTGGG CAGACCAACT CAAATCCCAA CATCCAGACT AACGGATAAA    7980

GAAAAAGCCC TTGCAATCGT CAAGGACTCT GTGGGTGCTA TCTTTGCGCG TGTACTTGAG    8040

GATGCAGGAG TCTACAAGCA GACAGAACAA GGGCAGACAG CCTTTATGCG CTTTGTGGAA    8100

CAGGTCGGAA TTTTACTAGA CTAGGAGCTT TCTCGG                              8136
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(2) INFORMATION FOR SEQ ID NO: 76:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10011 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

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CCCATAGTGA AGAGTGGCCA TAAGAAGGTC TTCTAGGCTT AATTTAGGTT TTCGTCCACC     60

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TGCGCTGAAC ACCAACAAGA CATTTAAATC GTGTATCAGT TAGTTGTTTA CTTGCTTCAT    180

CATTCATAGA ACTACTATAC CATGTTTTGT TTCGCAGGAA GTCTAATATT GTCAAATACT    240

GGAACGCTCA TTGCTGGGAT ACGGAATAAG ATTGGCCCAG CTTCGATAAC TGGGATACCT    300

GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG    360

TCTTCGTTTA CATCTTTCAC CATAACTGCA TCACAGTGAA CATCGTAACC ACGGTTTGAA    420

AGTTCTTCTT CTAGAGCACT TTTAATTTGG TGACTTGAGT TAACACCTGC ACCGCAGGCA    480
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623

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GCAAGAATTT TAATCATTTG GATTTCCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC       540

GGTTGCTTCA GCAATGTAAG CATAAAGGGC TTCTGGTTCA GAAATTTTTG ATAGGTCTTC       600

AAGATGACCA TTTCCTGTGA AGAAGTCCAT TAACTGAGCA AGAATGTTCG TTTGACTTGA       660

ACTTGAATTA TTGATGATAA AGAAGAGCAA GGATACTTCT ACTTCCTTAC CTGGCGCAAT       720

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ATGAACAATA TCTGTGTGAG GAATCATTAC ATTTGCAAGT CCTTTCCTAG AAATTCCATA       840

TATAAACCAG TTGGAAATGA CTTTTCACGC GTGATCAAGG CTTCACGATA AGTTGGAGTG       900

ACAATTTCTC GTTCTTCCAA CAAGCTTGCT ACCTGATCAA AAAGTTATTC TTGATTATCC       960

GCTTCTAAGC AAAACACAAG GTTTTTGTCA AAGAAATAAT CTAATACCAT AAGGTTTTCC      1020

CTTCTTTCCA TTAACTTTAT GCTATAAGTA TAACACTATA TGAAATCGTT GTTAATTACT      1080

TTCTATTCTT TTTTGTCTCT TTTTTTATAT TTTTGTTTTG TTTATAGTTT GTTATATAAA      1140

AATAAACACA CAAACAAATA CTCCAAGCAT TTTTCTGTTC TAATACTCAA TGAAAATCAA      1200

AGAGCAAACT AGGAAGCTAG CCGCAGTTGT TCAAAACACA GTTTTGAGGT TGTAGATGAA      1260

ACTGACGAAG TCACTCAAAA CATGGTTTTG AGGTTGTAGA TGAAACTGAC GAAGCAACAg      1320

CCATACATAC GGTAAGGCGA CGCTGACGTG GTTTGAAGAG ATTTTCGAAG AGTATAAAAA      1380

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TGCATAACCA CGTGTCGAAG ACTTAAGTTT ATCAAAGAAG TCAAAGACAA TTTCAGCAAG      1920

AGGAATTTGA TAGATAACAT TGACACGGTT ATCATCAATA TAGTCCATAG TCACAAAGTC      1980

CCCACGCTTA CGCTGAGCTA GCTCCATTAC TGCTCCGACG AACTCCTGTG GTACCATGAT      2040

TTGCGCCTTG ACATAAGGCT CTTCAATGGT CGCAATCTTA GTTGGGTCTG GAAACTCAGA      2100

TGGGTTAGAC ACATCCATAG ACTCACCGTC GGTCAAATTA ACTTTGTAAA TAACAGACGG      2160

AGCTGTCATG ATGAGGTCAA TATTGAACTC ACGCTCTAAA CGTTCCTGGA TAACATCCAT      2220
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624

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ATGGAGAAGT CCAAGAAATC CACAACGGAA ACCAAATCCA AGTGCCTGAG ATGTTTCTGG        2280

TTCAAACTGA AGACTAGCAT CATTCAGTTG CAATTTTTCA AGcGCTTCAC GCAGGTCATT        2340

GTACTTGTTT GATTCGATTG GGTAGAGACC CGCAAAGACC ATAGGATTCA TCTGCTTATA        2400

ACCATGTAAT GGTTCTGCCG CAGGATTGGT TGCCAAGGTA ACGGTATCAC CCACACGAGT        2460

ATCCTGAACC GTCTTGATAG ACGCCGCAAT GTAACCAACA TCACCAGTCG CAAGGAAATC        2520

ACGACCAACC GCTTTTGGTG TAAAAATACC GACTTCGGCC ACATCAAAGG TCTTACTATT        2580

GCTCATGAGC TGAATCTTAT CACCAGGTTT GACCACTCCG TCCATGACAC GCACTTGGAG        2640

GATAACCCCA CGGTAAGCAT CGTAAACAGA GTCGAAAATC AAGGCCTTAA GTGGCGCCGT        2700

CACATCACCC GTTGGTGCTG GTACTTTTTC TACAATTTGC TCGAGGATTT CTTCAATCCC        2760

AATACCAGCC TTGGCAGAAG CCAAAACTGC TTCACTGGCA TCCAAACCAA TCACATCTTC        2820

AATCTCTGTA CGCACGCGCT CCGGATCTGC AGCCGGCAGG TCAATTTTAT TAATGATAGG        2880

CATGATTTCC AAATCATTAT CCAAAGCCAG ATAAACGTTG GCAAGAGTTT GAGCCTCAAT        2940

TCCTTGAGCC GCATCGACCA CCAAAATAGC ACCCTCACAG GCAGCTAGCG AACGTGAAAC        3000

TTCATAGGTA AAGTCAACGT GCCCTGGTGT GTCAATCAAG TGGAAAATAT AAGTTTCCCC        3060

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CTCTAGCTCC ATGCTATCCA AAAGCTGGGC CTGCATTTCA CGACTTGAAA CCGTCTCTGT        3180

TTTTTCCAAA ATGCGGTCTG CTAGAGTTGA TTTTCCGTGG TCAATATGGG CGATAATAGA        3240

GAAGTTACGG ATCTTCTCCT GTCGTTTTTT CAATTCTTCT AAGTTCATGA TTCTCTTCCT        3300

TTCAGGGTAT CTATTTATTA TAAATTGTTT TTGATATTTT GACAAGACCA TACCCTGCTA        3360

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ACTATAATGG TCATAACTTT CTTCTGGGTC ATCTAGCCAA GTCAAAAACA TATACTCGTG        3900

GTTTCCGGAC AAACAGATAG CCCCTTGATT GTCCACCAAG TCCTTGACCA TTTCAAGAAC        3960

ACGGTGACTA TCCTCACCTC TGTCAATCAA ATCACCTAGA AAGAGCAACT GGGGCTGACC        4020
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625

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ATCCCAGGTT TTGAGAAGGT CTTCCAGCAT CCCAGCTTTT CCGTGAACAT CTCCAATTAC    4080

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CCGTCAAGAG ACGAACAGTC GAAACCGTTG AATGGTCATT ACTAATCTTC TCAATAAAGA    4260

ATTGATAATC TGCAATCGCA ATTACTTGTG GCAAATGGGA GATAGCCAAA ACCTGACCAT    4320

GCTGACCAAT TTTATGAATT TTCTGAGCAA TAGCTTGAGC AACACGACCT GAAACTCCCG    4380

TATCCACCTC ATCAAAGACA ATGCTAGTCT TGCCTTCTTT ACGTGAAAAG GCAGACTTAA    4440

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CCTTTGGTGC ACCATGACGA ATAACATCTG TCGTCGCACG AGCTCCCAAC ATCATATTCA    5640

TGGCATCAAT GATAATCGAC TTCCCTGCAC CCGTTTCACC AGTCAGGACA GTCATCCCCT    5700

TTTCAAAATT GAGGGAAATA GCCTCAATAA TGGCAAAGTT TTTTATCGAA ATTTCAAGTA    5760
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626

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TCTTATCCAT CAATTCAGCC GATTCGATAT TGTCTTCAGC CAGTTGCAGA CTTTTTACGA    6000

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ACTCTTTGAT ATCTCGGGAT ACCGTCGCCT GAGTGGCAGT GATACCTGCT TCTTTCAAAT    6120

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TCTACTGCCA TAGCTGTTAC AGATTCAAGG ACATTCTGAT GAACCTTAGC ATCTCGAATA    6420

ATTCCATTTT TCCCAATCTG CTCACGTCCT GCCTCAAACT GAGGTTTGAC AAGTGCTACC    6480

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CGGAAATTGA ACTGCTCCAT GCTGACAACT CGTGGGTCTT GGCGTAATTT CCAAGCCAAC    6660

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CAATTCACCC ACAGTTTTCA GCTTCACCTG CATTTCAGGT GACAATTCAG CTATAATAGC    7320

TGCCGCTTGG AAGGGATAGG CTAGTAACTT CCCAGTCTTA TTGGCATGAA TAGTCTGAAG    7380

TTCTTCCAAA GACAAGTGCT GGTGTTCGCC CTCCATATCC AAAACTTGCC CTGCTACCAT    7440

ACCCAGACTA CCTGAAGCAA GGGATAAGTT GGCAATCAAG TCCACCTTAA TCTGACTTGG    7500

CAAATCTGCC TGCGCAATCA AGGCATATGA GTCTAAGAAT AAGGCATCTC CAGCCAAAAT    7560
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627

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GGCCATAGCT TCACCGAATT TCTTGTGATT GGTTAACCGC CCTCTTCGAT AATCGTCATC    7620

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ACTAGAGGCA AACTGCTGGT CTCCATAAAA ATCTTCCAAA GCCGACTCGA CAAGAGCTAA    7860

TTTTTCTTGC TTTTTCATTC AAAATCACTT TCTGTTCCGT CTTCTTGCAT GACCTTGACC    7920

AAGGTCTTTT CAGCCTTGTC CAGCGTAGCT TGGAGCTCTT TTGACAAGAC CATGCCCTTT    7980

TGAAAGGCAG TAATCGCATC TTCCAGAGCA ATTTCACCAT TTTCCAAACT TTGGACAATG    8040

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CGAATCTACA ACGGACTCTT CTTTTTTGAC AATAGCATAA CCACGCGCCA CGATTCGGCT    8220

AGTATCCAAC ATGAGCAAAG CTTCCGAAAG TCGCTTGGCC TCAGCAACCT TGGCGTCATA    8280

AACTAACGCC ATTTGGCTAC CTAAGAGCTT GTCCAACTGT CCTAAACGGT CTTGATAGCG    8340

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TTCACCTTGA ACCTTGGTCG GATAAAGAAG GATGTCAACA CCTGGGAATC GCCTGCTGAC    8940

GGTCGTGATA ATATCTCGAA TAACGGCTCC ACTACGGCTG GTTACTACAC CAATTCTCTT    9000

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CTTCATTCCT TCTTCCAGGT CAAACCCTAA TTTCTGATAA ATCCCAGACC AGATGGTCGC    9240

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628

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GTTGGAAACT TGACCAGTTA AATAGACCCG TTCCAAGTAT GGGTCTTTAT CGAATTTCAT      9360

TTTCAGATAC TTGGTCAAAG TTGTTACCGA TAAATACTTT TCCATCTCCA CCTACTATTC      9420

ATTTACTTGC TCTTTCATGG GTATTATTAT ACCAAAAATA TGCCTAAAAA TCTCCATTTA      9480

TGTACCATTA TGAGGGAAAA ATAGAAAAAG GAGGCAAGGC CTCCACATGT GATTATTTGC      9540

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TATTGCTAAC CCCTTCAGGA ATGACGATAT CAGCATAACG CTTAGTTGAC TCGATAAACT      9660

GGTGGTACAT TGGTTTGACC ACACCTAAGT ACTGGTTAAT AACGCTATCA AGGCTACGGC      9720

CACGCTCCTC CATATCACGC TTGATACGAC GAATAATGCG CACATCGTCA TCCGTATCCA      9780

CAAAAATCTT GATATCCATC AAATCGCGCA GACGCTTGTC CTCCAAGACC AAAATACCCT      9840

CAACGATAAA GACATCTTGA GGTTCCTGAC GATAGGTCTT GCTACTCCGT GTATGCTCTG      9900

TATAGTCGTA GGTCGGGATG TCCACCGGAC GCCCTGCCAA CAATTCCTTA ATCTGCTCGA      9960

TCATCAAGTC TGTATCAAAG GCAAAAGGAT GGTCATAGTT GGTTTTGACG G             10011
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(2) INFORMATION FOR SEQ ID NO: 77:

     (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 5365 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

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CGTGTGGTCT TAAAAATAGA AGACAAAGAA CAAACTGTTG GAGGCTTTGT CCTTGCAGGC        60

TCAGCCCAAG AAAAAACCAA AACAGCTCAA GTTGTGGCTA CTGGACAAGG TGTTCGTACC       120

TTGAACGGTG ACTTGGTTGC TCCAAGTGTT AAAACTGGAG ATCGTGTCTT AGTTGAAGCC       180

CACGCAGGTC TTGATGTCAA AGATGGCGAT GAAAAGTACA TCATCGTAGG CGAcTAACAT       240

TTTGGCAATC ATTGAGGAAT AGAAGGAGAA AGTAAGTATG TCAAAAGAAA TTAAATTTTC       300

ATCAGATGCC CGTTCAGCCA TGGTTCGTGG TGTCGATATC CTTGCAGACA CTGTTAAAGT       360

AACCTTGGGA CCAAAAGGTC GCAATGTCGT TCTTGAAAAG TCATTCGGTT CACCCTTGAT       420

TACCAATGAC GGTGTGACCA TTGCCAAAGA AATCGAATTG GAAGACCATT TTGAAAATAT       480

GGGTGCTAAG TTAGTATCAG AAGTAGCTTC TAAAACCAAT GATATCGCAG GTGACGGAAC       540

TACGACTGCA ACAGTCTTGA CCCAAGCTAT CGTCCGTGAA GGAATCAAAA ACGTCACAGC       600

AGGTGCAAAT CCAATCGGTA TTCGTCGTGG GATTGAAACA GCAGTTGCCG CAGCAGTTGA       660

AGCTTTGAAA AACAACGCCA TCCCTGTTGC CAATAAAGAA GCTATCGCTC AAGTTGCAGC       720
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629

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CGTATCTTCT CGTTCTGAAA AAGTTGGTGA GTACATCTCT GAAGCAATGG AAAAAGTTGG    780

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AATGGTGGCT GACCTTGAAA ATCCGTACAT TTTGATTACA GACAAGAAAA TTTCCAATAT    960

CCAAGAAATC TTGCCACTTT TGGAAAGCAT TCTCCAAAGC AATCGTCCAC TCTTGATTAT   1020

TGCGGATGAT GTGGATGGCG AGGCTCTTCC AACTCTTGTT TTGAACAAGA TTCGTGGAAC   1080

CTTCAACGTA GTAGCAGTCA AGGCACCTGG TTTTGGTGAC CGTCGCAAAG CCATGCTTGA   1140

AGATATCGCC ATCTTAACAG GCGGAACAGT TATCACAGAA GACCTTGGTC TTGAGTTGAA   1200

AGATGCGACA ATTGAAGCTC TTGGTCAAGC AGCGAGAGTG ACCGTGGACA AAGATAGCAC   1260

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ATAAAATCGC TTATCACTCA GTTTACGGCT ATCCTGTTGT ATGAGCTTCC AGTAGCGCTT   2460
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                                          630
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ACTCATAGCA CGGCTAAGAT GTTGTACAAT GTGAAAGCGA TCCAACACGA TTTTAGCATT        2580

CGGGAGTGAA ACAGTCTGGG AGACTGTTTC AGCCTGAGCC TAGAAATTTG AAAGCGAAGC        2640

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GTGAAGGCAT ACTCATCCCA AGACATAATC TTTGGAAGCC GAGAAAAATC ATGCTCAAAG        2880

TGAAAGTCAT TGAGCTTGCG AATGACAGTT GAAGTTGAAA TGGCCAGCTG ATGGGCAATA        2940

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TCCAAGAGAC GTTTTTCCCC ATCTGTAAAA ATTTTAACAT CCAAATCGTA ATCAATATAC        4260
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631

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CTCTTTCAAT TCCTCTTCGC TTATCACCTT ATCTCTCGAT AACATAAAAC GAACAATTGT   5340

GTCTTCGGTG ATATAGCATT TGTCG   5365

(2) INFORMATION FOR SEQ ID NO: 78:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3636 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

TTTCCAGAAA GAAGTTGAGT AAAGTCTTTA TCAAAGAGAA TGACTTCCGT ATTGGAACTG   60

ACATTAGGTT TTATTTCTAC TTTACTAGCG TCCGCCCTAG CATTTTCTAA ATCTTTAATC   120

TCTTCTGTTG CCCTATTTAT AGCCAGCTGA ATAACTGCTT GAGGATTTTC ACTCAGTCCA   180

TGAAGCTTAT CGTCCACCGA AGTATAAAGA CTCGAATGCA TGACTTGTAA AATAATCAGA   240

632

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GTCATTGTAG AAAAAATCAG GGTGAAGACA CCGAAGTTGC GGATAAAATA ACTAAAGTCA     300

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ACTATTATAC CAAATTTGCC TTAAAAAAAA CTCAACTCTC TGCATTTTAC ATGAGATAGC    1080

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TGCCTCAGCC AACAAACGAC GTTCTTGAAC AATTTGCAGT TTGCTTGTGT TATCAAGTGT    2040
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GGGCACCACC CAGAGACGGT TCTTGTCTTC GTTCTCACCG ATGAAGAATT GTTTTTGTGA      2280

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TAAATCATAA TGTTCAGGAA CAAATTGCTT AATGGG                               3636
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(2) INFORMATION FOR SEQ ID NO: 79:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 5066 base pairs

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(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

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AATGCCCCAT AACTTGATAT CTGTCACATT TCTCAAGACG GTATTGAAAA ACAGAACTGA       240

AACAACTGTC CAAGCAAGGC TAAAAAGAGA ATAGAAGGGG ATGTAAAACC AGTAAAAATA       300

ATAAAAAATT GGAAAAAACT TACTATTTCT GTTGGCCTTT TCAATCCAGT TATCAAAATA       360

AAAGTACGGT GCTAAAAGTA AGAATTTAAA CAAATGTTCC ATCACCGACA TCCCCCCTTC       420

TTTTGATAGC GTTTTCTATT ATTTTATTAT ATCAAAAAAA TCCGGAACTG TCATTCCAGA       480

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CGTTCAAGAC AGCTGATGGA ATACGTGTAT TTTGACTTTC GCTGATTTGC TTAATCATCT       780

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CATAAACCTT ACCAGACTTA CGCATACCAG CCGTATCAAT CATGGTAAAC TCTTGACCAT      1140

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GTTCACCCAA ACCGAGAGCA TAGAAATCAT ATATATCATT TCTCATCTCA GGGTTGTCCA      1440

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GGCACACCCA GTGCCATCCC AAAGACAGAA TAGGTGTAGT CAGGTAGGTT AAAGAGCTCT    2100

GCCACTTCTT CAGACTTGTA TCGAACCAAA CCGATAATCA CACCACCATA GCCCAAGCTT    2160

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(2) INFORMATION FOR SEQ ID NO: 80:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9607 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

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GTTGGATGAA TTTGCCTTTT TGGGAGAGGA ACTGGCTCGT AAACTGGTTA TTGAAAACAC      5340

CAATGCCTTG GCAGAAATAT TTGAATCCGT TGAAGTCGTT AAGGGTGACT TGTATACGCC      5400

TTTCATCGAC AAGGCTGAAG AAACAGTTGC TGAGTTGACC TATAAGAAAG CTTTTGAGAT      5460

TTATGGAAAT CCGCTGCCAG ATATTGTTGA TTTGCGGATT GAAAAAGAAT TAACATCCAT      5520

ACTGGGGAAT GGATTTGCTG TGATTTATCT GGCATCGCAG ATGCTGGTGC AACGTTCTAA      5580

TGAACGGGGT TATTTGGTTG GTTCTCGTGG GTCTGTCGGA TCTAGTTTCG TTGCGACCAT      5640

GATTGGGATT ACGGAGGTCA ATCCTCTCTC TCCTCACTAT GTCTGTGGTC AGTGTCAGTA      5700

CAGTGAGTTT ATCACAGATG GTTCGTACGG TTCAGGATTT GATATGCCCC ATAAGGACTG      5760

TCCAAACTGT GGTCACAAAC TCAGTAAAAA CGGACAGGAT ATTCCGTTTG AGACCTTCCT      5820

TGGTTTTGAT GGGGATAAGG TTCCTGATAT TGACTTGAAC TTCTCGGGAG AAGATCAGCC      5880

TAGCGCCCAC TTGGATGTGC GTGATATCTT TGGTGAAGAA TATGCCTTCC GTGCGGGAAC      5940

GGTTGGTACG GTAGCTGCCA AGACTGCCTA TGGATTTGTC AAAGGTTACG AGCGAGATTA      6000

TGGCAAGTTT TATCGTGATG CAGAAGTAGA ACGCCTCGCT CAAGGAGCGG CGGGTGTCAA      6060

GCGGACAACA GGCCAACACC CGGGGGGGAAT CGTTGTTATT CCGAACTACA TGGATGTCTA      6120

CGATTTTACG CCTGTCCAGT ATCCAGCAGA TGATGTCACG GCTGAATGGC AGACCACTCA      6180

CTTTAACTTC CACGATATCG ATGAGAACGT CCTCAAACTC GATGTACTGG GACATGATGA      6240

TCCGACTATG ATTCGAAAAC TTCAGGATTT GTCTGGTATT GACCCTAATA AAATTCCTAT      6300

GGATGACGAA GGCGTGATGG CACTCTTTTC TGGGACTGAT GTGCTAGGGG TAACACCTGA      6360

ACAAATTGGA ACGCCTACGG GTATGTTGGG GATTCCAGAG TTTGGAACAA ATTTCGTACG      6420

TGGAATGGTA GACGAAACCC ATCCGACAAC CTTTGCGGAA TTGCTTCAGC TGTCTGGTCT      6480

GTCCCACGGT ACTGATGTTT GGTTGGGGAA TGCTCAGGAT CTGATTAAGC AAGGAATAGC      6540

GGACCTATCG ACTGTTATCG GTTGTCGGGA CGACATCATG GTTTACCTCA TGCATGCGGG      6600

TCTGGAACCT AAGATGGCCT TTACCATTAT GGAACGGGTA CGTAAGGGTT TGTGGCTAAA      6660

GATTTCAGAA GAGGAGAGAA ATGGCTATAT CGAAGCAATG AAGGCTAATA AGGTGCCAGA      6720
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641

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GTGGTATATC GAATCCTGTG GGAAAATTAA GTACATGTTC CCTAAGGCCC ATGCGGCAGC    6780

CTACGTTATG ATGGCCTTGC GTGTAGCTTA CTTCAAGGTT CACCATCCTA TTTATTACTA    6840

CTGTGCTTAC TTCTCCATTC GTGCTAAGGC TTTTGATATC AAGACCATGG GTGCGGGCTT    6900

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AGAGGATAAC CAGTTGAGTT TGTTTGATGA GTTGTTTTAA AAAATTGCTT AATAATCTAT    7320

TAAAAGAGGC TAACGTATAT CCAATAGATT TACATTAGCT TTCTTTTTTG TTAAAATAGT    7380

CTATGGAAAG AGGGTGAGAG TATGTCAAAG ATGAGTATAA GCATCCGTCT GGATAGTGAG    7440

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AGAAGTTTTG AATTTTCTGG TTCAAGAAAA AGAACATCCT GCCAGAAATC GTGATCATTC    7800

ATTGACGGCA TCCAAGCATT TTCAAGGAGT TCGTGAATGC CATACCCAGC CAGATTGGCT    7860

TTTGGTTTAT AAAGTAGACA AGTCGGAATT GATTTTAAAT TTGCTGAGGA CAGGCAGTCA    7920

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GAAAAATAAA AATAGAAAAG AGAAAACAGA ATGGTTTTAC CAAATTTTAA AGAAAATCTA    8160

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GCTCTCTCTA TTGATGTGGA GCAACGTGAA TTGGCACATC TAATCGTGAA AGAAGCTTAT    8280

GCCTTGGGTG CGCATGAGGT CATCGTTCAG TGGACAGATG ATGTGATTAA CCGTGAGAAA    8340

TTCCTCCATG CCCCGATGGA GCGTTTGGAC AATGTGCCAG AATACAAGAT TGCTGAGATG    8400

AACTATCTCT TGGAGAATAA GGCTAGCCGT CTTGGAGTTC GTTCATCTGA TCCAGGTGCC    8460
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642

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TTGAACGGAG TGGACGCTGA CAAGCTTTCA GCTTCTGCTA AAGCTATGGG ACTTGCCATG        8520

AAGCCTATGC GTATCGCAAC TCAATCTAAC AAGGTTAGCT GGACTGTAGC AGCTGCAGCA        8580

GGACTTGAGT GGGCTAAGAA AGTCTTCCCA AATGCTGCGA GCGACGAAGA AGCAGTTGAT        8640

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CAGTCAGGCA TTACCTTCTT TAACACCCTT TTCGATGAAA ATGCGTCAAA CCACTTGGCT        9180

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ATGGATATCG ATGGTATTCG TGAGGATGGA ACGCGGGTAC CTCTTTTCCG TAATGGGAAT        9360

TGGGCAAATT AAGGAGATAA TATGTTAGGA AGTATGTTCG TTGGTCTCCT AGTGGGATTT        9420

TTAGCAGGTG CTATGACCAA TCGTGGAGAG CGAATGGGAT GTTTTGGAAA AATGTTTCTC        9480

GGTTGGATCG GAGCCTTTCT AGGTCACTTG CTCTTTGGAA CTTGGGGGCC AGTTTTATCA        9540

GGAACAGCTA TTATCCCAGC GATTTTAGGA GCCATGATTG TTTTTAGCTAT TTTTTGGAGA      9600

CGAGGAA                                                                 9607
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(2) INFORMATION FOR SEQ ID NO: 81:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 14231 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

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CTACAAGATA ATTCCAGCTA TAACATCCGC TATAATAGTA AGAGCGAGCT CTATGATAAG          60

GCTCATTAGT TTCACCTCCT CTCACGAACC CATAGGAACG TAATCGGTAA CCGATGACAA         120

AAATAGTATA CCACAATACA TTTAGATCAT CAAGGTCACT TAATTCTTGA AATATCAGAT         180

CTAAGAGAAA AATCTTTAAA ATCAGAAAAA CGCATAATAT CAGGTGTGCA AAAACTTGAT         240
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643

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ACTATGCGTT TTATTGTGGG AAGGTTTACT CCATTTTCTC CTGAAATTGA GTTTTTGTCC    300

AGCCTCTGTT TTTAGGGTTG CTAAGAAAAT AATGTCATGT GGTGAATATT TGTAAATCAG    360

TCAGCAGACA GAACGATACT CTTCGAAAAT CTCTTCACAT CATGTCAGCT TCGTCTTTCC    420

GTATATATGT GACTGACTTC ATCAGTTCTA TCTACAACCT CAAAACAGTG TTTCGAGCTG    480

ACTTGATCAA TTTTCAAATC TGTACTTTGA GCAAGCTGAG ACTAGCTTCC TATTTGATTT    540

TCATTGAATA TCAGAAACCC ATTCTCCATC AAATAATTCG ACTGCGTCTA ATAATTTTTG    600

ATCTGGCACG GTGTCTGAAA TAAAGGTTGT GTATTTGGAG AGGGGATTAA TTTTAAAAAA    660

TCCAGTCTTG TAAAATTTAG AACTATCAAT CAGTAAGATG GTTTCATGGG CTTTGTCAAT    720

AATATTCTTT TTTGAAATAG CTTGGCTGAG AGAAGCTTCA TAAACATATT GGTCATCAAT    780

ACCTCTTGCT GAACAAAATG CTAAATCGAT ATTAAAATGA TCTAATAAAG AATTTTCCTT    840

ATCATAGTTG ACCACGGAAC AGGATTGATG TTTGACCTCG CCAGATGTGA TAAAGATTTT    900

GGAGCTATCT TTAACAGTTT CAGATAGGGT TTGTGCAGTA TGTAAACCAT TTGTAAAAAT    960

AATCAAATTA TCAAGTTCAG AAAGATAGGG ACAGAGTTCG TAGACAGTAG TACTAGAATC   1020

TAGATAGATA CACATACCAG ACCGAATAAA GTCTTTAGCG AGACTAGCGA TTAGTCTTTT   1080

TTGCCTAGTA CTTTCTCCTT CACGTATTTG ATGAGAAAGT TCAATTGTGT TCATAGAGGA   1140

CAGGGTCACG TATCCGTGCT TTCTTTTGAT AAGACCTTGA TTTTCTAAGA AAATTAAATC   1200

ACGACGTAAG GTACTTGTGC TGGAGAAAGT GATTTCTGCC AGCTCTTTTA CGGCAATTCT   1260

TTTTTTCTTT TTGATAATTT CAATCAATTC AAGTACACGT TCATCTTTTA TCATAAGCTC   1320

CTCCTAATTT ATCATTTCAA CTATATTATA GCACAAATTG GAGGAATTTG AATTATTTTT   1380

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TTTATCTTGG GATATTGACT TTCTACTAGC TAAAATTCTT GAAAGTATCC GCTTGGCTAA   1680

TACTAGTTAC AAGATTTTAT CTATCGGTAT TGACACATGG GGAGTTGATT TTGGACTGAT   1740

TGATAATGAA GGTAAGCTGT TATTACAACC TGTTCATTAT CGTGATGAAA GAACAAAGGG   1800

AGTGTTAAAG GAAATATCTG AAATGACTGA ATTAGAAAAA CTGTATTCAG AGACAGGAAA   1860

TCAGATTATG GAGATAAATA CCTTGTTTCA ACTCTTTAAG GCACGTCAAG AATCTCCTGA   1920

CTCTTTCTAT AAGACCAATA AGATTCTTTT AATGCCAGAT TTGTTTAATT ATCTCTTGAC   1980
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644

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AGGTAAGTTT GCTACAGAAA AAAGCATTGC TTCAACAACT CAATTATTTG ATCCTAGGAG        2040

TCAAAATTGG AATCAGAATA TCTTAAAACT ATTTGAATTG GATTCATCTT TACTTCCTGA        2100

AATTGTTTCA GAGGGAAATG TTCTTGGAAG GATAAAAGAG GAGTATGGTT TAGGCGATAT        2160

TCCTGTTGTG AATGTTTGTA GTCATGATAC AGCAAGCGCG ATTGTCTCAG TACCTAAGAC        2220

AGAAGGTAGT TTATTTATTT CATCAGGTAC TTGGTCTTTG GTTGGAGTGG AACTTACTTC        2280

ACCGATTCTT ACTACCGAAT CCTTCAGTTA TGGATTTACA AATGAAGTCG GTAAAGATGG        2340

AGTGATTACA TTTCTGAAGA ATTGTACAGG GTTGTGGATC ATAGAGGAAC TAAGACGTTC        2400

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TTAAAACATA TACCGAAAAA TATTTCTCCA GATTTATTGA AGACTTTAAT GGAAATGGGA        3720

CATGGAGATG AAATAGTATT AGCTGACGCG AATTATCCTT CTGCCTCATG TGCAAATAAG        3780
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645

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CTAATTCGTT GTGATGGTGT AAATATTCCA GAATTATTAG ATTCCATTCT GTATTTAATG   3840

CCATTAGATA GTTACGTCGA TAGTTCAATT CAGTTTATGA ACGTTGTTTC GGGTGATGAT   3900

ATTCCTAAGA TATGGGGTAC CTATAGACAG ATGATTGAAG GTCATGGTAC AGATCTTAAA   3960

ACGATTACTT ATCTTAGAAG AGAAGACTTT TATGAACGTA GTAAGAAAGC TTATGCTATT   4020

GTTGCTACAG GAGAAACTTC ACTTTATGCT AATATTATCC TTAAGAAAGG AGTAGTTGTT   4080

GAAAGAGAAA ATGTTCAATA GAGGAATTTT AGTTGCCAGT CATGGTAATT TTGCTAGCGG   4140

AGCTCTCATG ACCGCAGAAA TGTTTGTTGG TGAGACAACA AATGATAGAG TTAGGACATT   4200

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AATTGTTCAC AATGCTCAAA ATAGTTTGTT TAATGTTAAA CAACAACTTA ACGTAGAGGA   4500

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GTTGTCACTA CGTGGCTAAA AAAGTATGAT ATTGAGCAAG TTATCATTGT TAATGATCGC   4620

ATCTCAGAAG ATAAAACACG ACAATCTATT TTAAAGATTT CTGCACCGGT AGGTTTAAAA   4680

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GCTGGTATCG CTATAGCAGT TCCAATTGCA GTTGCTACCC AACAGTTGGA TGTTCTTGCA   5340

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TCAAAGATCG GTTTTTATCA TTATTCAAGT TTGGTTTTAA TCACGTTATT TAAAATTGTA   5460

CCAATTTTCC TAGCTATTAT GCTTGGAGGG GAATATGTGG CAGACTTGTT TGCTAAGGTT   5520
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646

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CCACCAATCG TTATGCAGGG ACTTAACTCT GCAGGTGCTT TACTACCTTC AATTGGTTTT    5580

GGTATGCTTT TAAATATGAT GCTCAAGAAA AATATGTGGG TATTCTTGTT GATTGGATTC    5640

ATTTGTTCTG TGTATGGAGG AATGTCAACC ATTGGGATCT CACTAGTTGG TATTGCGGTA    5700

GCATACTTCT ACGATATGAT TGGAAGCAAA CCACAAGAAA CAACTTCAAG TAGTGATGTT    5760

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GTTACGGATG GTGAAGTAAG TGTATTGGGA GAGACAATAG TTATTCGGAA TGCTACAGAG    7320
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647

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CAGGGAGAAT TTAGTAGTAT TGATTACTTT ACAGAAAAAG ATGAACATGT AAAAAAATAT        7440

CAGGAGCAAT TTAATAGAGT TGATTTTAAA CTAGACTATA GTAAAGGTTG TCTTAGCATT        7500

CCAACGAATC TACTTCTTGA AAACACTAAA AAGTATAGTA ACTACTTGAC TAACTTGTTA        7560

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ATGAATAAAG AAAAAATAAA AAGAAAATTA ATCACAATAT TGTTTGTATG TATTGGGATG        9000

TTATGTTTTG GATTGTTAGC AGGAGTTAAG GCTGATAATC GTGTTCAAAT GAGAACGACG        9060
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648

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TTATGGTGGG GGAACACATT GAAGGGAGCA TGGGAAGCTA TTCCTGAAGA TGTAAAGCCA    9180

TATGCAGCGA TTGAACTTCA TCCTGCAAAA GTCTGTAAAC CAACAAGTTG TATTCCACGA    9240

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TTAGATGAAC AATTCCAAAA GTATAGTGTG TTAAAAGGTG TTTTAAATAT TGAGAATTAT    9420

TGGATTTACA ATAACCAGTT AGCTCCGCAT AGTGCTAAAT ATTTGGAAGT TTGTGCCAAA    9480

TATGGAGCGC ATTTTATCTG GCATGATCAT GAAAAATGGT TCTGGGAAAC TATTATGAAT    9540

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AATCCAAATA ATTTACATAT TTTATTGAAT AATTACAGGA CAGATAAGAC AGCTATGTGG    10440

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CATAATGGAA TGGTAGAGAT GTCTATAAAT ACTGAGGGGA CAGGTCCAGT CTCTTTCCCA    10740

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649

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TAAATGAAGT GGGTCCTTAT ATCAAGGAAC TTGGCTATAA AAAGGCACTT TTGGTGACAG    14160

ATAAGTACAT CGAAGGCAGT GATATTTTAC CTAAGACTTT AAAACCACTG GATACAGAAG    14220

GAATCGAATA T                                                          14231
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(2) INFORMATION FOR SEQ ID NO: 82:

    (i) SEQUENCE CHARACTERISTICS:

651

(A) LENGTH: 16995 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

AGTTCTCTTA	ACTTTTTTAG	GATGGCATTC	TCCGCTCTCA	GGTACTCATT	TTCTGCTgAA	60
GACGTTCTAA	TTCTGTCCTC	TCTTCAGGTC	TCGTTTTTGG	CTTACGTCCC	ATTTTAGGTA	120
CTCTCCCTCT	TGTTTTCTCA	ACAATAGTAT	ACCCGTTTTT	CCTGTATTGT	GCTAGCCAGT	180
TAAGAAGTAT	CGTACGACTT	GGGAGACCGT	ATTCAAGAGA	AACTCTATCT	TTAGTCCAGC	240
CTTCATGTCA	GACTTTATTA	CTCATTTCTT	GTTTTAAATC	AGGAGAATAG	TAACGATTTT	300
TTCCTTTTTT	GACGAACTCT	ATTCCGTAAC	GATCAATCAA	TTTAATCATG	TACCTAATAT	360
TAGAATTGCT	TATCCCAAAT	TTATTTGAAA	GCTTCTCTAA	GCTATATCCT	TGTTTTCTAA	420
GTTCATAGAT	CTGAACTTTA	TCATCATAAG	TTAGTTTCAT	AATAAAAACA	CCCCAAAAGT	480
TAGATTTTTT	CTGTCTAACT	TTTGGGGTGT	AGTTCATGTA	CACCTGATAT	GATGCGTTTT	540
ATAATTTTTA	AGCCTTTTTG	CCCAGCCTCG	TCAAAAGTAA	TGTTTTGACA	CAAAATCTGT	600
GACAAAACTT	TAGTTTTAAA	GGTTTTTAAC	TTTGTATATA	CTAGTTTTAA	GAAAAGGAGG	660
ATGATCTAAT	GGAAGAAAAA	GTATCATTGA	AAGTCAGGGT	TCAAAAACTA	GGGACATCGC	720
TTTCAAATAT	GGTTATGCCC	AATATTGGAG	CATTTATTGC	TTGGGGAGTA	TTGACTGCCC	780
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TAACGTATTT	ATTGCCAATC	CTGATTGGTT	ACACAGGTGG	ATATATGATC	CATGCCAAC	900
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TATTGGAAGC	TAATCCTGGA	CCAGGTCTGG	GAATTCTATT	AGCTTATGCT	GTATTCGGTA	1380
AAGGTTCTGC	TAAATCTTCT	TCTTGGGGGG	CAATGGTTAT	TCATTTCTTC	GGAGGGATTC	1440
ATGAAATTTA	CTTTCCTTAT	GTTATGATGA	AGCCTACTCT	ATTTTTAGCT	GCTATGGCAG	1500

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ATGTTCTTTT AGGTGTTTTA GTGGCAGCAG TTGTTTCTTT CCTTGTAGCA GCCCTTATTC    1680

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CGTCCCTATC CTTTTTCAGG GTGAAAATTT GCCAGAATCT ATCCAGATTT TAGTTGAAAG      3480

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TTTAAAAATG GTTTCCATAT TGATTTTGTG GATGTCAATA ATCAGATAAT TCATGCTCTG      5040
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TGGAGAAGAG TTGATTGGCC AGCCAAGTAT CTACCATAGA GAATTCATCC ACGATGATAA      9240

AGTCAGCATC TAGGTAATCT TCCAGATGAC TGGTATCATC GTCACCTGTC ATTCCCAAGT      9300

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CAGTTGGAGC AGCAAGAAGA ATGGGCAGAT TGCTTTTCTT CCTGAAGTCA AGTCCTTCTA      9420

AAAGGGCATA AACAGCAATG ATTCCATTGA TAACAGTTGT CTTACCAGTA CCAGGCCCAC      9480

CTGTCAGGAT AAAGACCTTA TTCTGGATAG CATCACAGAT AGCCTGTTTT TGAATGTTAT      9540

CATACTCAAT TCCCAGTTCT TGCTCGACAG TAGTGATATG TTTTTGAATG GTTTCTAAAT      9600

CATGACTCTT CTGTTTTCCT TTTTCAAGGA TACGAACCAA GTGACTGCGG ATGCCTTCCT      9660

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TATCCTCAAC CAGCTGGTAG GGATAATTTT CAACCACATC AAGGGTTTCT TCCTTGTAAA     10020

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TTGAAAAGTA CTTGACCAAG CCCTTACTAG TTGGTTTTGC GCGATCATAA CGACTGATTT     10320

GCAGTTGTTC TCCATACTTG GAGTGCTGGA CAATTTGCCC CCAAAAAGTA TAGTCTTCGC     10380
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658

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659

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660
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GATTTCCATG ACAGGAACCT TTATTGATAC CCTCATCATT TGTACTCTAA CTGGTTTGAC    16980

CATCTTGGTA ACTGG                                                   16995
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(2) INFORMATION FOR SEQ ID NO: 83:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 28473 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

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CCGGGGCTTT TGTAGTATAA TAGAGATACG TTTTGAAAGT AGGAGGTATC TATGGACTTA      60
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661

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ACTAAGCGCT TTAATAAACA GTTAGATAAA ATTCAAGTTT CGTTGATTCG TCAGTTTGAC        120

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ACGCCAGACC ATGTCAAGGA GGCGGGCAAG CGAGCGATTG ATCAGAACCA ATCCTACTAT        240

ACAGGGATGA GTGGTCTGCT GACTCTACGT CAGGCAGCCA GTGACTTTGT TAAGGAAAAG        300

TACCAACTGG ACTATGCTCC TGAAAATGAA ATCTTGGTTA CAATTGGGGC GACAGAGGCT        360

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GCACGATTTC TCTTGCGAAT CAATGATGAC GGACTCAGTT ACATCGAAGA CTATCATGAG       1440

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GCAGCTCTTG CAGATGCTAG TTTGCAGGAC AATCAGCAGG ATGCTCCCTT GTTTGCTTTT       1560

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GAGCATTATC ATGAGGATAA GAGACGTTGT CATCTCAATC CCAATATCCC CTATCTGCTC       1800
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662

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663

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CACTCTTGGT AACCGTGATT AACATTGTGG GTTCTTATTA TCTGCAGTCT ATCATTGATA    5280

CCTATGTGCC AGATCAGATG CGTTCGACAC TAGGGATTAT TTCTATTGGG CTAGTCATCG    5340
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664

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669

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671

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GCATCCAAGG GCTACCCGCT AGACTATGAA AGGGGCGTTG AGTTGCCAGC CAAGACAGAA      19680

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676

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677

GAAATGAGTT CTGCTTCAGT GTAAAATTTA TCTCCACTGC TAAACTGCCC AGAGATGATT   28440

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(2) INFORMATION FOR SEQ ID NO: 84:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 6749 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

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679

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GCAAGAAACA GCCGGATCTC AACTGGGAAA ATGAAAAACT TCGCCAGAAA ATTTATGAGA    5100

TGATGAACTT CTGGATTGAT AAAGGTATTG GTGGTTTCCG TATGGATGTT ATTGACATGA    5160

TTGGCAAAAT TCCTGACGAG AAGGTAGTCA ATAATGGTCC TATGCTCCAT CCCTATCTCA    5220

AGGAAATGAA TCAGGCGACC TTTGGAGATA AGGATCTCTT GACAGTAGGG GAGACTTGGG    5280

GAGCAACTCC AGAGATTGCC AAGTTCTACT CTGATCCAAA GGGGCAAGAA TTGTCTATGG    5340

TCTTCCAGTT TGAACATATC GGTCTTCAGT ATCAGGAAGG TCAGCCTAAA TGGCACTATC    5400

AAAAAGAGCT GAATATCGCT AAGTTAAAAG AAATCTTCAA CAAATGGCAG ACAGAGTTAG    5460

GAGTTGAGGA CGGCTGGAAT TCCCTCTTCT GGAACAACCA TGACCTCCCT CGTATTGTCT    5520

CAATCTGGGG AAATGACCAA GAATACCGCG AAAAATCTGC CAAAGCCTTT GCAATCTTAC    5580

TTCATCTCAT GAGAGGAACT CCTTATATCT ACCAAGGTGA GGAGATTGGG ATGACCAACT    5640

ATCCGTTTGA AACACTGGAT CAAGTAGAAG ATATTGAATC TCTCAACTAT GCGCGTGAGG    5700

CTCTTGAAAA AGGTGTTCCG ATTGAAGAAA TCATGGACAG TATCCGTGTT ATTGGACGTG    5760

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GGCTAGTTCG AGCTGACTTT GAATTGCTTG ATACGGCTGA TAAGGTCTTT GCTTATATAC    6000

GTAAGGATGG CGACCGTCGC TTCCTAGTTG TGGCTAACTT GTCCAATGAA GAGCAAGACT    6060

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TTGAAAAACA GGTCTTGGCT CCATGGGATG CTTTCTGTGT GGAATTACTA TAAATATTTT    6180

TTGCAGAAAA ATTTAAAATT GAAATCGTAT AAAAACAAGG GAGGACTGTA TAAAAGACAG    6240

AAATCCTTTG TTTTTTATAA CCAAAGTTTA TAAACTTTCA TTCTTGAAAT TCAATTAACT    6300

TTACAAATTC CCACTATTAA GGAGAAAGAA GATGAACATA AAGAAGCGTG TCCTTAGTGC    6360

AGGCCTGACT TTTGCATCTG CTTTGCTTTT ACCCAAATCA TTCATACCTC TCTCAACTAG    6420

ATGTAACTTA CAAAACCCCT GACCTCATGA GCCACTTTCT TCCTCCTCAT GAGGTCAGTT    6480

TTACTTTCTG CTGTTCCAGT ATCGTTTTTC CTCGCTAGAT TTCCTCAAAA GGGCAGACTC    6540

CTCCCTTGGT GCGTCACACG ATTTTTTCAT CTCGACTGTT CTTTAATGCA TCATTAACGA    6600
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681

CGCTTTTCTT CTAGGTGGTT CATAAGGAAC AGGAAGATTC AGGTTGACTT TTCTAATCCT   6660

AGAATAAAGT GCTGAAAACA ATTCGGAATA GGCATAGAGA CTAGACAATT TGAGGAGCTG   6720

CTTGCGTCCT GTTCGAACAC ATTTTCCGG   6749

(2) INFORMATION FOR SEQ ID NO: 85:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1842 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

TCTACCCATG GACTTTGAGG CATTCATTGT TCCATCTTCT AGTGGCGAAT CTTTTGATAC   60

AAACGATTCA ATTCACTTGG ATAGTGAAAC TCTCCCGCAA ACATTTTTCT GGTTAACTCA   120

ATCCAGCTGA TATTTCTTTC AGCCAAAATA ATGGACAAGT TCTCCCAAAA TCGTTCAGCC   180

ATATTGCTTC TCCTTTAGTT AGATAAATAA TGTGTTTGCG CCATGTAAAT CAATTGTTTC   240

GTATCTCTTG GCAATAGAGC TCTAGCCTCT TCCAAATTCA GACTTGGATA AACTCGCTTA   300

TTTGAAACCG CAAGAGGAAG TCTGATGGTT AGTTCAGGAT TTTTTAAAAT TATCTCAACG   360

AAATCCGTTA ATCTTAGATT GTCACGGTTC TTAAATCGTA ATAAATTGGG AGATAAAAAC   420

TCAAAACAAT CTGAAGAATA GCTCATCATC TCAATTAATT TGTCCTTTGT CATTTCAGAA   480

ACTGAATGAC AAGATACCTC TATGCCATAG TTTTGGAAGA AATCTAAAAG AAGTTGATTT   540

CTTTGTCTAT TTTTACTTAG ATAGAGATCA ATCATGGGAG ACCTCCCAAA GATTCGGTTC   600

CATTTGATAT TCTGACACGA TTAAGGAATC TAATAAATTA AGGAATCTAA TAAATTTGCG   660

AAGTTAATCG GTTTCTTGTC TTCATCATAA GCTTTTACAG TTACTTGGGT TGTAAGTATT   720

CCCTCTTTTC CCTCGGCTCG ATAGCCTTGT CCATATAAAA CAAAAACGAG ATTTTGATGA   780

TCATCTACAA AGGCATCAAC CCCATTCTTT ATGTCTTGAC TTTCAAGGAA TTCCATAACG   840

TTTTGAAGAT AGGATTCGTA AAATAGTGGG TAGTTATGTT TTTTATGGTA ATCATCTAAA   900

AATGTCACTT CAAACTCACA TGGAGAGTAA TTTTGACTTT GAACAGCCTA AAAGTGCCAT   960

CAAATTTGAA TTGGAATAAA TCAAATAAAT AGCCCCATCC TCATCAATCC AACCTTTGCT   1020

CAAAGACAAC TCCAACCGAT CTTTTAAAAC TGAGTAAACC ACCTTAACCT CCAGTTTCAT   1080

ATTCTTATAC CGTTCACTCT CAAATAAAAG TTTGGGGAGC TTATAATAAC GCTCTGATGT   1140

CTGATATTGA TTAGCGGTAA TACGCTTCAT TATTGTCCCT CCAAGACTAA AATTCCAACA   1200

682

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TTTCCAAATT CATCAAATCG GATTAAACCT ACTTGTTCCA TTTCATCAAC TAACTGAGTT        1260

GCTTTTACCC AAATCATTCA TACCTCTCTC AACTAGATGT AACTTACAAA ACCCCTGACC        1320

TCATGAGCCA CTTTCTTCCT CCTCATGAGG TCAGTTTTAC TTTCTGCTGT TCCAGTATCG        1380

TTTTTCCTCG CTAGATTTCC TCAAAAGGGC AGACTCCTCC CTTGGTGCGT CACACGATTT        1440

TTTCATCTCG ACTGTTCTTT AATGCATCAT TAACGACGCT TTTCTTCTAG GTGGTTCATA        1500

AGGAACAGGA AGATTCAGGT TGACTTTTCT AATCCTAGAA TAAAGTGCTG AAAACAATTC        1560

GGAATAGGCA TAGAGACTAG ACAATTTGAG GAGCTGCTTG CGTCCTGTTC GAACACATTT        1620

TCCCACCACG TGAAGAAAAA GATGGCGGAA GCGTTTGATT GTTAAAGTTT GGAAGTCACC        1680

TCCAGCTAGA TGTTTGAGAA AAAGATAGAG ATTGTAGGCG ATACAGCTCA TCATCATACG        1740

AACTTCGTTT TTGATTAAGG TTGAACTATC CGTTTTATCG CCAAAAAATC CCTCCTTCAT        1800

CTCCTTGATG AAATTCTCGG CTTGACCACG TCCACGATAA AG                           1842
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(2) INFORMATION FOR SEQ ID NO: 86:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 19390 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

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TCATCTTTAT CTCCTCGAAA TTTTCTAATA TAGCCATTAT AACAGAATTT TGTGAAAATT          60

CCTATTATAG TAAATCACTA TTTCAGTATA AAAAGAAAAA ACGAATCAGA CGATTCGCTC         120

TTCTTAAAAT CTGAAAATAG CTTTCCAGAA AGGATTAGCC GATTTTTTGC AGATTGAGCA         180

CTGCATCGTG ACTCATCAAG ACTTGACCAT ACTCTTGTAA GACTGAGCGA CTGATATCAC         240

TATCGTCTGC AAACTCGCGC ATACGGGCCA ACAGCCAAGC TGGATATGGG CTTGGATGAT         300

TTTCAATATC CACTAAAATG GTCAAATAAT AGCGCTCGTT CATTTTGTAG AGTTCAGAAG         360

TTTCCATTTC AAAAGTCACT GTCTTGGCAA AAGCTACCAA GTCAGCCAAC TTAGCAAAAG         420

AAAGGATGTA GTAGATGTAA GGTTCTTTCT TACTCTCAGC TTCTTGTTCA GCCTGCTCTT         480

GCTCTTCTTC CTTGACTTCA ACTTGCTCAA GAGATTGAAT GGCTTCGATA TCATCCTTGG         540

TTTTGTCTGC GATGCTTTTT TCCAGGGTTT TGATAAATTC ATCTGGAGAC ATTTGAGCCA         600

ATTCTTCCAT ATCTGGCAAA TCCGATAAGT CTTCAAAATC TAGATTTTGG TCAATCTTTG         660

ACTTGGTCAC AAAGACATCT ACCTTATCAG GTTTTGGAGT CACACGGAAG CTCAACATGC         720

CTGTATCCAG AAAGCTATCA GGCATCTCTA GCTCATCCAA GATAGCATAA AAGAACTCTT         780
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683

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CTGTTTTTTC TTGAGGAACG AGAAAGTCAG CAATCTCCAT TCCACGATCC ATCAAATCCT      840

CTAAAGATAT CGTGATTTTT AAAGTTGTAT CACTAATTTG TTTCATTTTC ATTGCTAGTA      900

ACCTCATACT TTCAGTTCTA TCTATTATAC TAGATTTTTA CGATTTTATC AAAAGAAGGC      960

TCCTCTATAC GGATAGATTT TCCCTAGGGT CTTTCTATAG GAGACTCCAA AAGAAAATTT     1020

CTGCAGACAG ATAGAAAAAG CCTTCAAAAT CGGCTAAGAG CCGACTTTGA AGACCTTATA     1080

CATCAGAATA CTTATAATTT AAAGGTTGCT ACACCGAGGA TAGAACGATT TAAGTTTCTG     1140

AGAATTTGAA GACTTTGCTC AAATTTCTTA TAACGAGTCA CTCCGTACTC TTCAACAAGA     1200

AGGACTGTAT CTCTTTCCAA AAGAGATGAT ACATCCTGTA AATCTACAAA ATGCATTCCT     1260

TTTAAAGCTT CTTGACTCTG TTTCAATTTA TCTAAGATAG CTTTATTTGA GCTAACGATG     1320

GTCAATTCCT GTCCAGTATT TTTGTATGAC AAAACATCTG CTAGGTTAGC AATTGTTGTA     1380

ATCTCTGTTA CAAAATCAAT TTGATACTGA GAAAAATCAC CTACTCTATT GATTGTTGGA     1440

TTAAAGAGAT AAACTAACAC ATTTCCCATC ACAACCAAAA TCACACAAAC CACTCCAATA     1500

ACAACTAAAC GAAGAATCAG ATTTTTCACA TTTAAGCCAA GCGCTGTTTC ACCATTTGCG     1560

TTCAATTCTT TAGAGTTGAT GGTTTCCAGT TTTTCAATTT TCACATTTGC ATAGGCATGT     1620

TTAAATTTCT CAATCAACCC ATCAATTTTT TTCTCTAACA AGTTATTGGC ATCTTTACTT     1680

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GCAATTTTTT TCAACTCACT GGGTTCTACA TCATTGAAAA GATAAGCTCC ATTCAAATTA     1860

CCATCAATCA ATTTCCCATA AAAATCACTA TAACCACCAA TTTGATGATT CAAAATCGTT     1920

TTGTCCGACT CTTTTGGAGG AGTGATTTTA TAGATAAGAT AAGTTGAATA ACTTGTTGTA     1980

TCTTTGACAG TGTTTTTATT CCTAACTGCT TTAATTGTAA ATGGTACAGC AATGAGAGCA     2040

AATAAAGCGA TGAGAGCTAA AATATTTGCT TTTCGCTTTT TATAAAGATT TGCAAACAAA     2100

TCAGCTACTG AATAATGTTC AAACATGATT TTTTTCTCCT TTGTTTAGTA GATACTAGTT     2160

TTCCTTTGTA AGCATTTTTG CTACAAATAT AATCACAAGA ACAATTCCCC AGAATTGCAT     2220

TGTAAATAAA TTGAAGAAAC TTTCTGAAAA GCTGCTTCTT GGCATAAAGA ATAGATTATT     2280

CAAGATGAGT AGGGATAAAG CAAATAGGAT TGTCCTTGAG CGATAGGCTA CTTGCAGCAT     2340

GGCTATAAAT AATACGCCGA GTAAGAAACT AAGCAGAAAG ACTCCAATCA TACCATAGTC     2400

GGTATACAAC TCCATGATAT AACTACTTCC GATACCATGC CCTTTCAAGT ATTCCTTGTT     2460

CAAGACAAGA TAGGATAGAT TGTGGGCATA ACTATTACTA TCAATAGCTA GTTCCACACT     2520
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684

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ATTGGTTGTA TGTTCAAAGG CTTTTCCTCC GAAAATGGCT CCCAAACTCC CCCTTGCAAA        2580

ATAATCAAGA ACAGGACCAA AAGTAAAATT ACGGAAATCT CGGTAAGGGA GGCTACTGTT        2640

AAATAGAAAA CCTCGAGCCA GAACACCAAA ACTAGTCCCT TGTTTATAGA TAAAGTCAAG        2700

TAAGATATCC CAGAAACCTG TATGGGAAAC TTGGACATTA TCCCGTACAT AATTGAGTAC        2760

TCCCATCGCT AACATGAGAA TAGGAGAACC TACAAAAATC GCTAACTTTT CTTTAAACCC        2820

AATCCATTTT CCTTTTTCAG TTTGCTCCCG CATAAAGTAA TAAACAAAAG CAAATmAAAT        2880

ACTTAAAATA AAGGGATTTC GTGTCCCAAT TGCCAAATGA ATAGTATTAG CTGCAATAAA        2940

GGAGACAAGC ACTGCTGTGG CCTGCAATTT CTTTGGCTTG GTTGCCAGAT ACATACACAT        3000

TGCATAGACC GTAAAGGTAG ACAAAATGTA GGTAAAATAA GGCAGTTTAC TTTCAAAATT        3060

TGCATAGTAG GCATAGTAGG AAGTCTGCAA ACGATACAAG AGCCGTTCAA ATAACCGAAT        3120

GAAATAGAAA GGATAAGTTA GAAGAAAAAC TCCTAGTGAT ACAAAGCGTA ACCGCTTGAT        3180

ATAAACCTCT TTTAGAGAAT TTCCTATATT TGCTACTTTT ATTTTCTTCC TAGCTATGAA        3240

GTAACGAGCC AGAATGCCTC CTGTGGTCAA GCCCAGAATC GAAATCATGA CAACTATAAA        3300

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GGTCGGTCTT GATACCAGAA ATACAAAAAT GGTTAAATAG AAAATAAAAT GGATTAAGTA        3420

ATACTTGATA TCATTCCAAC AAGCAATTAA GCTACTAACC AACAAGAACA ATAAAGTAGA        3480

AAGTAAGCTA ACATTATTAT TATTAAACAG ATACACAATT CCACTTACTA GCGTCAAGGC        3540

ATAACTGACT ATGGTCAAAC TAAATAATAA TCGTTTCCCA TCAATCACTT GGTCACCCCC        3600

GTTCTAATGT AATTTTTTAG ATTTTTCAAT ATTTTTCAGT AATAAGAATC GATATAAGGA        3660

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TAAATCAAAA TGGTAATAGG CATCTTCGTA AATCAACCCC TTAGGAAAGG ATAGGGCAGT        4080

TGCAATCTGT CTCTTGATTA GCTTATTGCA AATCGTCCCA GGTATTTTTT CACCTATGAG        4140

GTATTCCTTT AGAAATGTTT GAGAATCACA GACAAAATAG TCATCCTGAT TGGCTGACTG        4200

TGGGCTTTCA TCATTAGCAT AGACATTCAT GACACCACAG CTCGAAACAT CCGCATCTTC        4260

TTGAACTAAT TGCTCATATA AGCTCTGAAT CATTTCTGGA TGGATATAAT CATCTGAGTC        4320
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685

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AATAAAAATC AGATAATCCC CGTGAGCCTG CTTCATCCCA TCATTTCGTG CTTGCGACAA      4380

TCCTTCGTTC TTTTTATGAA GCACTGACAC CCTGTCATCT TGTTCAGCGA TTGAATCACA      4440

CAAGCGACCA CTTTCATCTG TTGCACCATC ATCAACAAGA ATAATTTCCA GATTTTGATA      4500

GGTCTGCTTC TGAATGGAAG CTATCGATTT TTCTAGGTAC TGCGCCACAT TATAGACTGG      4560

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TAGACAAAAG AACTTTCGTC TGAGATAGAT ACTGATAAGG ATTTTTTTGA TAACCAAGGA      4920

AATGTACATA GTCCTCAATC CCATACTCTT TGACTCGTTT TTTCAGTTCC TCTTCCATAT      4980

CACCAGCCCC GATAAAATAG AGATGATAGT TTTTTCCCTC TTGGTGTAAT AATCGTATCA      5040

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GAGGAGCAAT CTCGATATCG ATCTTCTCTT GAGATTTTTC TAGAATAGTC TGAAAATCAT      5160

ATCCATTGTA GATTGTCTGT AATTTAGAAG TATAATCTGG ATAAACTTCC TTGATAGAAT      5220

TGCTGGTCTT TTTTGAAATC CCTACAATTG TATTCGCAGC ATCCAACTGG CTTCTATGTG      5280

ATTCTCTTTT AGAGCTATCC TTAAGAAGTT CTTCAATACT TCCATGAATC CAAGATATCT      5340

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CGGAGAGATT TTGGAGTCAA ACCCAGTAAA ATGCGACTTC CCCATTTCAT GAGATCACCA      6060
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686

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TAAAAATTCG TTTAAGACGG AGCTTCCGTC TTTTCTTTTT TGGAGGGAAA GAGAGTGCTT    7860
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687

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TTTCTTGTTC CAAGCTAGAG CTACTATTTC CCCTAGCAAG AGTTAGCTTT TCTTGCAAAT    7980

AGGCAAACTC ATTTTTTTCT CTCTCATTGA GATAGTGAAT ATTTTTTAGC AAATAATCAT    8040

AACGCAACTG CTCATGATGA CTTAAGGGAT TTTCTTTACT CATCTTCTCT CCTTTCCATG    8100

GTCTGATATT GGATAAATAG GATAGGCACC CAGAATTTTA TACTGGATTC CAATCGCTTC    8160

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688

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CTTGACCTTG AGCTCCTCAG CATCCTTGAT AACTGTTACA CCTTGGGCTT GGGTCGCAAG    9720

CAGGGCAATA ATGGGCAATT CATCAATCAA TCGTGGAATC AAAGCGCCAC CAATCTCTGT    9780

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TTACTTTTTT                                                          19390
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(2) INFORMATION FOR SEQ ID NO: 87:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18436 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

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GTCAATTCCT GACTCGGTCG CCACAATGAC CATGTCAACT TCTTGTCTTT CTTGCTCAGT    4680

TAAAATAGAG TCACTAGCAC TGGCCGCCAA GGTCACGATA TCCTCAGTTA GGGGCGCAAT    4740

ACTCAATTCC TTGAGTAAGA GTCCTTTACT TAATTTTTCA GGGTCAATTC CCCTCGCTTC    4800

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GATTGTCATA TTTACCTCTG TTTTATCATT CATGTAAAAA ATCGTTCTAT ACTATTTTAT    4920

CACAAATGGC AGTAAAAGAG AGAAAAAAGA CTTGATTCAC CAAATCAAGC CTCTTATTGG    4980

TCATCATTTT AAAGAATGAT TAGTTGCTAG AGAGTTCACC GATATAAGTA GCTTTATAAG    5040

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CAGACAATAA GGAAAGTAGT AGACTTCCTG CAAAACTAGA ATCCTAGTTC ATGATTGATA    5340

ATACCAGCAA TCAAATTCAT TCGTAATCCG AAGCGTTTAC GATGATTTCG ATAGGTTGTT    5400

GAAAACATTT TAAACGTTTT TACTTTGGCA AAGATGTTCT CAACCTTGCT TCTCTCCTTA    5460

GATAGCGCAT GGTTACAGGC TTTATCTTCA GCTGTTAGCG GCTTGAGTTT GCTGGATTTA    5520

CGTGGAGTTT GTGCTTGAGG ATATATCTTC ATGAGCCCTT GATAATCACT GTCAGCCAAG    5580

ATTTTACCAG CTTGTCCGAT ATTTCTGCAA CTCATTTTGA ACAACTTCAT ATCATGACTA    5640

TAGTTCACAG CGATATCCAA AGAAACAATT CTCCCTTGAC TTGTGACAAT CGCTTGAGCC    5700

TTCATAGCGT GAAATTTCTT TTTACCAGAA TCATTCGCTA ATTGTTTTTT AGGGCGATTG    5760
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697

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698

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699

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701

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702

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703

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704

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GGAACTTGTA CAAGATTTTC TTTTCTATCT ATTTATACTC AATGAAAATC AAAGAGCAAA    18300

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TAGTTTGTTT CTATTC                                                    18436
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(2) INFORMATION FOR SEQ ID NO: 88:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 7001 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

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AAACGTCCTA GGTATCTTTC TCAGTCTATG TGACTTACAA GGGAAAACTC TTTTCGAGAC     120

AGAAATTTTG AATGAAGATT ATCCTATTTC AGAAATCAAT TCCACCATTA CCAATATGAT     180

AAAAACAGCT ATAGAGTACG TCCCTTTGGA AACAAAATTA CTTGGATTTG GCTTATCAAT     240

ACCTGGACAT TATAACAAAG ACTCCGGAAG TATCATTACA AACAACCCCA TATGGGAATC     300

TTTTAATTTA TTAAATGTAA TTAAAAGATT CAATTTTCCT TTTATTGTAA AAAATAATAT     360

CGATTGTATG GCTATAGGAC AATACCTTTT TAATCCACAC AATACCCCCG ATAACTTTAT     420

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CTCTAAAAAT CCTTATATCG GAGAAATTGG ACACACCATT GTCGAATTGA ATGGGCAATA     540

TTGTGAATGC GGAAAAAAAG GTTGTTTACA AACATATATT TCGGATGCTT GGTTAATCAA     600

ACACGCCCAA TTATTATTTA AAAATTCCCA ACTAACTGTA CTAAAAAGCC TTGTAAAGAC     660

TGAAAAAGAC ATTCATTTAG ACACCCTTTT AACGGCTTAT AATTTAGGCG ACTCCGCTTT     720

ACGTCAACAA ATTGATAAAG GAGTCAATTT ATTAGCCACT TCTATTGCAA ATCTCCTCCT     780

CATCAATCCT GCTGATAAAA TCTATATCAA CAGTCAATTG CTTAATTATC AACCTTTCAC     840

TCATGAAGTC AGGGATAAAA TCCAAGACCA GCTCCACTTC GTTCCCTTTA CTCGTAATAT     900

AGAAATTGAA ATTTTACCTT ACAACAAACA TCGTGGAAGT ATAGGAGCTT GTGCATTAGC     960

TATCGTCGCT TTTTTCATAG AACATAGCAA TGTATTACAA GATATTATTT CACCTTAATA    1020

TATTAGAAAT CTATAGACCT GTTTAAATCA ACTATAACCT GTAGTAGATA TCTCGTATTT    1080
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705

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AGACAATATG AAAACAAGAC GACTTCCATA TAGGAAACCG CCTTCTCGCT ATGTTGAGTG      1140

ATTTATATTA AAATAACTTT TCTTCTAGCT GCATTTTATT ATTATAAAAA CATTCATCAT      1200

AACCCCCAGA ACTTAAATAA CAATTTTTAT TCAAGATACA TACTCCTAGA ATAAACTTTA      1260

TATGAAATTC TCATTTTTGT TTTTACAATT CTCCTTAGTT AAATCTTGTT TAATATATGT      1320

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AATACAGACA CTCGTAACAA CTGCTTCATT TTTCTACCAA CATATTTAGG AACAGGATAA      1980

GATACAAGAG TATTAATCCA TAGCTCAGTT CTATACCAAT CTAAGACAAA TAAGCTAAAA      2040

AAACGATTGA TAATAAGCAA ATAGATTCCA AATTTTCTCT ATCTGCTCAT TTTAATAAAC      2100

AATACTAGTG TAACTATCCT TCCAGTCAGA AGCTTGTCAA ATCACACCGA AAATTCTTCT      2160

AAAATTTATC TCGTTAGGCA ATCAAGCAAA AACTCGACGA TAGTACAAAC ATTATCATAC      2220

AGGATTGACT TCCTAAATTA TATACTTTAG TAAGGTTTTC GGATAAGAAA AAAGGTTCAT      2280

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GAGCATACTC CAACTCATAA ATATGTGATT TCATTAAATA AACCTGCTAA GTTAACCAAT      2700

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AAATAAGGAA TTAATTCAGG AAAATCTGAC TTTAACAATT ATCTGTGTCG GTGGTTATGT      2820
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706

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ATTACATTTT ATCACAAAAT TACTAGACAT TAAAGACCCT AATATCCAGA TTTTAGACAT    3060

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TATGACTTAG CTAGACAACT TTTCCCGTGT GCTAAAATCG TTCTTGATCG CTTTCACATT    3720

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AATAATCTCA TCAAACTTAT CAAGCGCAAT GCCTTTGGTT TTCGAAACTT TGAAAACTTC    4200

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CGAGCTTAGC TTTTTTTCAA CCCACTACAG TTGACAAAGA GCCGGAAAAA GGAACAGCCT    4320

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AAACAGGATT CCCAGAAATG CCAGTACCAC TAGCCCACGG TACAACCATT GAGAGGTTGC    4440

AACACGCGAT ACAGATTGTC CTTCTTTCGT AAAAGCAACC CTCGCAACTG CAGCTGTTTG    4500

TGGATCTGAT TTTTGATAAA CAGCGACTCG TTCAAAATTC ACTAATAAGC GTTTATTAAA    4560

GGTAGGAATC GGATCGCAGG TTATCAAGGT CATGATATTT TTAGAGCTAA CCGATTCTAA    4620
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707

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CTGGCCATTA TCATAATAAA GAGCATCTCC AACTTTTAGC TGATCCAAAT GGCGGAAAAA       4740

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CAAATAAACC GGCTCCATGA TTTCCAAACT TGGAATAGAC AAGTAACCAT AGACTGCATC       4920

AGGGTCGTCA GACACTTGGT AATTGACCTC ATATCCCTCC GCCAAAAAAG GATCTACAAT       4980

GCGATTTTGC GAAGCCAAGC GTTGATTGTA GGCGAGAGAA TGGTTCTGTT GTTCTTGGTA       5040

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CAATTGGTGC CGTATACGGA ATCCGCTTCC CACGTACCAA CAGACGATGA CTGTTAATCA       5400

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CAAAGTCATT CGGCTCCACC GTCACTATCT GATCCACTTG GTAGGCCAAC ACCTGATCTA       5520

AAACGTGAAG ATAAAAGATA TCCCCTTTTT TCATCTTATC CAATTGACTG AACAATTCTG       5580

CCGTTGGCAA TCCTCTGTGA GCAGTGATCA CTGTATGGGT ATTTTCACCT CCAACAGGCA       5640

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GAATTTCAGA TGGTTTCAAG GTCGCATTGA AGGCTTGAGC CAAGCGCCAA CGCTCCTCAA       5880

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CAATACGATA ATAATAACGA GACACCAATG GATATATCGC AACGGCGAAT CCTACTAAGA       6000

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TACTGTTGTC CATCCTCCAC CTTCACTTCC TTCCTTGCTG CTTTCAGCGC CTTCAAAGCC       6120

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AAACCAACTG CCACATAAAA CAGGTAGCGA TAGAGATGAC TGAGTTTGTT TGCTGCAATA       6240

AATTCTTCCT CAACCTCTGC TACGTACGGT ATCCGATGCC CCCGAACCAA TAGACGATGG       6300

GTATTGATCA TGTATGGCGT ACAAGTCAGC AAGGTCACAT AATCATGACC TGGTACAATC       6360
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708

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AATAAATCAT CAAAGTTCGT CGGCTCAATC ACCTTTACTT GATCCACTTG ATAGGCCATC        6420

ACTTCCTTGA TATTGTGCAC ATAAAACTTA TCCCCAACTT TAAGTTTGGT CAAATCCGTA        6480

AACATCTTAG CTGTTGGCAA ACCTGTATGT GCCGTAATCA CCGCATGGGT CGAATTGCCT        6540

CCGATCGGCA GAGAAGTTCC CTCTAGATGC CCAGCCCCTT GCTGCAATAC CTCTTCAGCA        6600

GTACCAGCAT AAACCGGCAA ATCCACGTCA ATAACGGGGA TTTCCACATG CCCCATCCGC        6660

TCATGGATTT CTAACATACG TGCATACTCT GCTCGCCCTT TTTTCTTCAT TTCTTCCGAC        6720

CAAGGATCGC CACTCACTAC ATTATTCAAA GAGTCATTGA AGGCTTGTGC CAATTTCATT        6780

CGTTCATCAA TGTCAGCCTC ATCCAACGTT GCTTTTTCCT TATCAAAGTC AGCAATTTGT        6840

TGATTTGATT CCACTCGATA ATACAAGCGA GACACCAGCG GATACGCCAT TACCGCCATT        6900

CCAATGAAAA ATACCACTCC TAATAGGAGA TTATTTCGTT TTTGCTTTTT TGTTTTTACC        6960

ATTTTTATCA GCATCCCTTT ATCTTCAAAC TTCAGGGTAT C                           7001
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(2) INFORMATION FOR SEQ ID NO: 89:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10411 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

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GATATTTTTA AAACTGTCGC CAGCTTGTGA TACGATGCTT TGTTTAAGGT CATTTAGGGT        120

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GATGATATTG ATCTGGTTTC CTGTTATGAC CTGATCAAGT TTGTAATTTT TTAAGGTATC        240

TTCAACAATC TTGCGGATAT CTTCTTCTGT CAGATTTCCC TTACTTTCTT TAGCTTTGGC        300

GAGTCCTGAC TTGATATCAG CTAGGGCAAC GTTTAATTTA TTAGCATCAT AGCCTGATTT        360

GTCCTTGTTT TCAGCATTGA TATCTGACAA AGCTTTTAGC TCTTCTTGAG CCAAATCTTT        420

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ACTTTCTCCT GTAACTGGAA TAGGGGCTGC TACAGTGATT TTGGCATGTT CCATACCCAG        540

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AATCTTGACC TCAAGTGGCG ATTTGTCACC TAGCTTTTGA ATCTTGGCTG ATGAATACAA        660

CTGTAAGCTA GAGTCATTGG CCACATTCAT GATTTTAGAA TAAACATCAG GTGTCATGGT        720

CTTGAGTTCT TTGGTATCTG TTGAGGCATT GTAGCCCAGT TTTTTAAGAG TTTGATTTTT        780
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709

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TTGGTCTTCA GATAGGGAGG AACCTAGGAC ATATTCAGGT TGGACATAGG TTTCATCGAT      840

AACTTTTTGA ACATCTGTTG CTGCATGGAC GCTATTCATA GCTGTTACTG CCCACAAGAT      900

CGCAGCGCTA GTCAGAAAGA GTTTCTTTCT CATAGGGAAT TTCCTCCTTT ACTTCTTTAG      960

AGTAATATAT CTATCTTAAA GAAAACTTAT AACAAAAACA CCTGGTCTAG CCAGATGTTG     1020

AAAAGAGAGT GAAACATTTG ATGATGTAAA GGTTAAGTCG TACCTGTCTA GAATAATAAT     1080

AGTTTCCTCC ATTTACATAG AGTTCAGCAC CGTGAAAAAT GGAAATGGGG TGAATATAAC     1140

TATAAGTCTT TCCAGTCCTA TTACCAAGCA AGGGGGCAAC AGTCTCACGA GAGTACTGTT     1200

TGGCTAGAGC CAGGGTATTT TCCTTGCCAT TTTGGGCGAT AAAATCGATA TAGGCAGGTC     1260

CAAAATTATA GGCTTGAACA GCTGTCCAGA TATCTACCCC CTTCTTCTGC GCCAGATAGA     1320

GATTGCCTGT CAGAGTTTGA ATGCCTTGCC GAATGCTAGA GGCATTATCA TTGATGGTGT     1380

TGGTGGAACC ACTTGCAGAC TCACTAGACT GCATAACATC GCCTTCTTTT CCTTTTGTTT     1440

CAGTATAAAT CATAGCAAGC ACAAGCTCTT CGTTTGCTGG GGTGTCTTGT TCACTCAATA     1500

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ATACACATGT TCAATTTTTT TACGCAGGTA TTCTTCGATT TTTGGAGTAA TATTGAGAAA     2520
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710

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CTTATCTGCT AAGAACAGTT CGGTATCATC CGGACTGAAC TGGTGAATAA TGGCTTTCTT    2580

AATATAAATG TCCATAAAAG TTTTAGTCCT CGTATAATGG GAAGGCATCT GTCAATTCTT    2640

TGACTGCACT TCTCACTTCT TCTAATACAG CCTCATTTTC TGAATTCTTA AGGGTTTTAA    2700

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CACCATAATA ACGGCGTCCT GGGTAACCCT CGGCATATTT ATTTGTCAAG ATAGACCCTT    3720

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CCAATACCTT GACCTTGCGC TTGAGGTGAA ACTGCTAAAG CTAAGATATT AAATCCTGCT    4140

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GCATCCTCAT AGCCAAGTAG GAAATGATGG GAATCCTGAG ACAGTCTAGC TAGTTGGCTA    4260

GCCGTTTCCT CTGGACTAAA AGTATAACCC AAAGCCTCTT GGTTGATGTC ACATATAGCT    4320
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711

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TTCACATCAG TTTCTCTTAA ATCTCTTAGC ATCTCATTCC TCCTCAAAAG AAATCTTTGG   4380

CAACCGAGCA AGAATATCTT CTCGCTTAAT GGCCCCTTGA CGTAAGATTT TCACCTTGTC   4440

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TGAGATATTG GCAGACGGCC CAATCAAGGG ACCTGTCTCT CGAATCAAAT CAAGGGTAAT   4620

GGGATGACTA GGCATCCGAA ATCCAACAGT TGCAAGGCCA GAATTGACCC AATAGGGAAC   4680

TCGGTCATTA GCTTCGAGAA TAATGGTCAA GGGACCTGGT AAAAAGATCT CTACAAGTTT   4740

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ACCATTTTCC AACTCTTGTC TAATCCTGTC CATCATCAAC GACAACCATC CTATCTTGAC   4980

CAAATTGGTC CTTGAGTGTT CGTACTCGCT TTTCAGGAAG ATGTTTCCTA AAAAGTTCAG   5040

GAACACTTTG ACCTTGCTTG TATCCAATTT CAAGGTAAAT CTTACCACCA TCTTTGAGAT   5100

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TTCTGAACGG TCACCAGTAC CGATTGTCGA CTTACGCTCA GCGTCCTGCT CATCTTGAGC   6000

AATCTGAGCA AAGTGGTCAG CAACACGGGC ACGGATGATT TTCATGGCCT TCTCACGGTT   6060
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712

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CTTCTGCTGG GTACGTTCTT CCTGCATCTC AACCTTGATA TTGGTTGGCA AGTGAACGAT    6120

ACGAACGGCA GTCGCAACCT TATTGACGTT CTGTCCACCA GCACCAGAGG CGTGATAGAT    6180

GTCGACACGA AGGTCTTTTG GATCAATGTC GTATTCAACC TCTTCAACTT CTGGCATAAC    6240

AAGAACTGTC GCTGTCGAAG TATGAACACG GCCTTGGCTT TCTGTCACAG GAACACGTTG    6300

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ATCTTTGAGT TCTTGCTTGG CCAATTCTTC CAAGTCCGCA TCTCCGCCTG ATTCCTTAAT    6660

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TGCCTGTTCA TTTTCTGGTT CATArGACAA CCAAAGTTTA TTGCTTAAAC CTGCTGGCGC    7020

TGTTCGAACA TAGTCTAGTA CTTTATCCAT AATTGGTTTA AAATATCCTT GATTTTGAAA    7080

ATTCTTATCA ATCATAAAAC GAAATAGTAA ATAATTTCCA CTACTAATTC CGATCTTTTT    7140

ATCATAAGCT ATCATCACAA AACCTATAAT TGCATCATTA TCATAAACTG CCAATGGAGC    7200

TACAAAATCT CCATTTTTAG TGTAGACGTA TGCTTCAGCT AAACTAATTG CGTTGGTTGC    7260

AATGAATTGT TTTTGATATT CCTTGACATC CAAATTTAAA ACATCAAAAT AATTTTCCAT    7320

TGTAACATCT CTTAGTTCAA TTGTCATAGT TTTGCTCCTT GTTAGAGGTT ATCATTGGCG    7380

CAAAATAATG TTTACGGCAA ACTGAGATAT AGGTTTCGTT ACCACCAATC TGGATCTGᴄT    7440

CTCCATCGTA AACGGGCAGT CCATCCTGTG TTCGCAACAC CATGGTCGCC TTTTTCTTGC    7500

AATACTGACA GATGGTCTTG ATTTCGTCAA TCTTGTCTGC TAAAAGCAAG AGATATTTGG    7560

AACCTTCGAA CAATTCATTG CGAAAGTCAT TTTTCAAGCC AAAAGCCATG ACGGGTATGT    7620

CTAACTCGTC CACAACACGA GCTAGGTCGT AAACATGGTG GCGTTTGAGA AACTGGGCTT    7680

CATCGACCAA AACACAGTAA GGTTTTTCTG GTAGGTCTCG GATATAGCCA AAGATATCCG    7740

TTGTTTCCTC AATCGCAAgG GCAGGGCGTT TCATGCCAAT TCGACTCGAC ACATAGCCAA    7800

CGCCGTCACG CGTATCCAGA GCCGAGGTCA TAATCACAAC ACCTTTTCCT TGCTCCTCGT    7860
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713

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AGTTATAGGC CACTTTGAGA ATCTCAATCG TTTTACCAGA GTTCATGGTC CCATAACGAT        7920

AGTACAACTG TGCCATGTTT CTTGCTTCAC GTCCATTTCT AAATTTTTGC TACATTCTAG        7980

TATATCATAA TTTTCTTAAG CTTTAAACGG CAAAATGTGG TAAAATAGAA GAAATCAAAA        8040

ACTAGTGGAG GAAGCTATTA TGCCATTTGT ACGCATCGAT TTATTTGAAG GACGCACGCT        8100

CGAGCAAAAG AAAGCTCTTG CTAAGGAAGT AACGGAAGCA GTTGTCCGCA ACACTGGAGC        8160

CCCTCAATCT GCTGTCCATG TCATCATCAA CGACATGCCA GAAGGAACTT ACTTCCCACA        8220

AGGGGAAATG CGTACTAAAT AAGCTAGCTT AAGCAGAATT GCTTAGGCTT TTTCAATCTC        8280

CAAGTAGCAT TCATTGAAGA AATATCCTAA ATTTGTTACA ATTTGAAAAG AAACTTGGAG        8340

AATTTCCAAG AAAAGAGCTA TTAATTAAAG GAAACATTAT GATTACACGT GAATTTGATA        8400

CCATCGCTGC TATCTCTACT CCACTAGGTG AAGGGGCTAT TGGTATTGTC CGCCTGAGCG        8460

gAACAGACAG TTTTGCTATT GCGCAAAAGA TTTTTAAAGG AAAAGACTTG AACAAGGTTG        8520

CCAGCCACAC TCTCAACTAC GGTCACATTA TTGATCCTCT GACTGGTAAA GTCATGGACG        8580

AGGTTATGGT TGGGGCTATG AAGTCTCCAA AGACCTTCAC TCGTGAGGAT ATTATCGAGA        8640

TTAACACCCA CGGTGGGATT GCGGTGACCA ATGAAATTCT CCAGCTAGCT ATTCGTGAAG        8700

GGGCTCGGTT GGCAGAACCT GGTGAATTTA CCAAACGTGC TTTTTTAAAC GGTCGCGTAG        8760

ACTTGACACA GGCAGAGGCT GTGATGGATA TCATCCGTGC CAAGACTGAC AAGGCCATGA        8820

ACATTGCGGT CAAACAATTA GACGGCTCCC TTTCTGACCT CATTAACAAT ACCCGTCAAG        8880

AAATCCTCAA TACACTTGCC CAAGTTGAGG TCAATATCGA CTATCCTGAG TATGACGATG        8940

TTGAGGAAGC CACTACTGCT GTTGTCCGAG AGAAGACAAT GGAGTTTGAG CAATTACTAA        9000

CCAAACTCCT TAGGACAGCA CGTCGTGGTA AAATCCTTCG TGAAGGAATT TCAACGGCTA        9060

TCATTGGACG TCCCAACGTT GGGAAATCAA GCCTTCTCAA CAACCTCTTG CGTGAGGACA        9120

AGGCTATCGT AACAGATATC GCTGGGACAA CACGAGATGT CATCGAAGAG TACGTCAACA        9180

TCAATGGTGT ACCTCTCAAA TTGATTGATA CAGCCGGTAT TCGTGAAACG GATGATATCG        9240

TTGAACAAAT TGGAGTTGAG CGTTCGAAAA AAGCTCTTAA GGAAGCTGAC CTAGTTCTGC        9300

TAGTACTAAA CGCTAGTGAA CCACTAACCG CCCAAGATCG CCAACTCCTA GAAATCAGTC        9360

AGGAGACTAA TCGCATTATT CTTCTTAACA AAACTGACCT GCCTGAAACG ATTGAAACTT        9420

CGGAACTACC TGAAGATGTC ATCCGCATTT CAGTTCTTAA AAATCAAAAC ATCGATAAAA        9480

TCGAAGAGAG AATCAACAAC CTCTTCTTTG AAAATGCTGG TTTGGTTGAG CAAGATGCTA        9540

CCTACTTGTC AAACGCCCGT CACATTTCCT TGATTGAGAA GGCCGTTGAA AGCCTACAAG        9600
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714

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CTGTTAACCA AGGTCTTGAA CTAGGGATGC CAGTTGACTT GCTTCAAGTT GACTTGACCC      9660

GTACTTGGGA AATTCTAGGA GAAATCACTG GAGATGCTGC TCCAGATGAA CTCATCACCC      9720

AACTCTTTAG CCAATTCTGT TTAGGAAAAT AAGAAAAATC CATGATCCTT CATTCGGTCA      9780

TGGATTTTAG GTTCTATAAT ATTTGTAGTG GGTAAATCCA CTATAGATAT TATGGAGCCT      9840

ATTTTATTGT AGAAAAAAAG TCCCATATGA CCTATAATGA AAAGCGACAA AACAACTCAT      9900

TAGAAAGAAT CATATGGAAC AATTACATTT TATCACAAAA TTACTAGACA TTAAAGACCC      9960

TAATATCCAG ATTTTAGACA TCATCAATAA GGATACACAC AAGGAAATCA TCGCCAAACT     10020

GGACTACGAC GCCCCATCTT GCCCTGAGTG CGGAAACCAA TTGAAGAAAT ATGACTTTCA     10080

AAAAACCTTC TAAAATTCCT TATCTTGAAA CGACTGGTAT GCCCACTAGA ATTCTCCTTA     10140

GAAAGCGTCG ATTCAAGTGC TATCACTGTT CAAAAATGAT GGTCGCTGAA ACTTCTATCG     10200

TCAAGAAGAA TCACCAAATC CCTCGTATCA TCAACCAAAA GATTGCTCAA AAGTTAATTG     10260

AAAAGATTTC TATGACTGAT ATTGCCCATC AGCTTTCCAT CTCAACTTCA ACTGTTATTC     10320

GTAAGCTCAA TGACTTTCAC TTTAAACATG ATTTTTCTTG TCTTCCTGAG ATTATGTCTT     10380

GGGATGAGTA TGCTTTTACA AAAGGGAAGA T                                    10411
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(2) INFORMATION FOR SEQ ID NO: 90:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 2393 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

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GTTTTGGGTT CTGGAAATTA TCAGATGGTT GGAAAAGCCG TCCACATCAA GATAGTGTTC       60

GGAGATTTAA GTTTAAATTG AAGAAACTAA CACAGAGGAA ATGGAGTATA GACCTAACAA      120

GACGTATTGA GCAACTGAAT TTGTCTATTC GAGGATGGAT AAACTATTGC TCATTGGGAA      180

ATATGAAAAG TATAGTCGCC AGCATAGATG AGCGCTTGCG TACTCGCCTA CGAGTGATTA      240

TCTGGAAGCA ATGGAAGAAG AAATCGAGAC GATTATGGGG ATTGCTTAAG TTAGGAGTTC      300

CTAAATGGAT AGCAGATAAG GTATCTGGCT GGGGCGACCA TTATCAATTA GTAGCTCAGA      360

AGTCGGTACT TAAACGTGCT ATATCAAAAC CAGTCCTGGA AAAACGTGGA CTGGTTTCGT      420

GTTTGGATTA TTACCTTGAA CGACATGCGT TAAAAGTTAG TTGAACCGCC GTATGCCAAA      480

CGGCACGTAC GGTGGTGTGA GAGGGGCTAG AGATTATCCC CTACTCGATT AACTCCCCTG      540

AAATTTATTT TAATTATGCA AATTTCACGT ATTTTTGATG CTGAGACGAC GATCCTGGGA      600
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715

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ACTTTTCAGA TATTTTTTTG ACTATCTAAA TCTATCATTA GAAAAGCTTA GAGCGCCAAA      660

GGATTTGAGC GTTTTTCTGA TTTTTAAGAC TTTTTCCAGT CTCTTTTTCG ATTGAAGATG      720

TAATTATTCT ACTAACTAAC TAACTTCTTA GTACTAGCCA ACAACGATAA TCATAATTCC      780

TCCTAAAATT AGGAATAATA AAGGCAATAG TTTTTGTTTT TTCATGTAAA AAACCTCACT      840

TTTGTTTTCT GCTATTTTAT GCTAAAATAT TAAAAATCAA ATTTAATTCC AAAGTTTGTA      900

ACTAAAGGGG GAGCGCTACA TGTCTAATTC ATTTGTCAAG TTGTTAGTCT CTCAATTATT      960

TGCAAATTTA GCAGATATTT TCTTTAGAGT AACAATCATT GCTAACATAT ACATTATTTC     1020

AAAATCAGTA ATTGCCACAT CACTAGTTCC TATCTTAATA GGAATATCCT CTTTTGTTGC     1080

GAGTCTTTTA GTTCCGTTGG TTACTAAAAG GTTAGCGCTA AATAGGGTTT TATCTTTATC     1140

TCAATTTGGA AAGACTATAT TATTGGCGAT ACTGGTAGGA ATGTTTACCG TAATGCAATC     1200

CGTAGCGCCT TTGGTGACCT ATCTATTTGT TGTTGCAATT TCCATACTAG ATGGTTTTGC     1260

AGCACCCGTT TCCTATGCTA TTGTGCCACG CTATGCGACC GATTTGGGTA AGGCTAATTC     1320

AGCCTTATCA ATGACTGGTG AAGCTGTTCA ATTGATAGGT TGGGGATTAG GTGGACTCTT     1380

GTTTGCAACA ATTGGTCTGT TACCTACCAC GTGTATCAAT TTAGTCTTGT ATATCATTTC     1440

TAGCTTTCTG ATGTTATTTC TTCCTAACGC TGAAGTGGAG GTGTTAGAGT CAGAAACTAA     1500

TCTTGAAATT TTGCTCAAAG GTTGGAAGTT AGTTGCTAGA AATCCTAGAT TAAGACTTTT     1560

TGTATCAGCA AATTTATTGG AAATTTTTTC AAATACGATT TGGGTTTCTT CCATTATACT     1620

TGTTTTTGTA ACGGAGTTAT TAAATAAAAC GGAAAGTTAC TGGGGATATT CTAATACAGC     1680

ATACTCTATT GGTATTATAA TTAGTGGCTT AATTGCTTTT AGGCTATCTG AAAAGTTCCT     1740

TGCTGCTAAA TGGGAACCCC AATTATTCAC CCCAAATCTA AAAACCATCC AGAATCCTTG     1800

CCTTAGCTTA GATCCTGGAT GGTTTCTTTT TTCACCCAAT GGGTGTTTTT TACTAGACAA     1860

AAAAGAGTTT CCCCTTTATG GTATAAGTGT AGAAAAAAAC ACAAAAGAA AGGAAACTCA     1920

CATGAACAGT TTACCAAATC ATCACTTCCA AAACAAGTCT TTTTACCAAC TATCTTTCGA     1980

TGGAGGTCAT TTAACCCAGT ATGGTGGTCT TATCTTTTTT CAGGAACTTT TTTCCCAGTT     2040

GAAACTAAAA GAGCGGATTT CTAAGTATTT AGTAACGAAT GACCAACGCC GCTACTGTCG     2100

TTATTCGGAT TCAGATATCC TTGTCCAGTT CCTCTTTCAA CTGTTAACAG GTTATGGAAC     2160

GGACTATGCT TGTAAAGAAT TGTCAGCTGA TGCCTACTTT CCAAAATTGT TGGAAGGAGG     2220

GCAGCTTGCT TCACAGCCAA CCTTATCCCG TTTTCTTTCC AGAACTGACG AGGAAACAGT     2280

CCATAGTTTG CGATGCCTCA ACCTTGAATT GGTCGAATTC TTTTTACAGT TTCACCAGCT     2340
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716
AAACCAACTC ATTGTAGATA ACGATTCTAC CCATTTCACA ACTTATGGCA AGC   2393

(2) INFORMATION FOR SEQ ID NO: 91:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4762 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

TTTGTATCTT TTTAGGTCTC TTTCAATCCA AACCCTTTAA ACTATACGTC ATTTCGGTTC   60

CTGCAAGTCT TGTGGTAATT TTAGGTTTGA TTTTACTTTT CTTTTCACAA GAGCCTCTGC   120

ACGCTTCTTA TTTGATGGTC GTCTTCCCTG TTTTCCTACT TTTATTGGTA ACCAATATTA   180

AGAGTCAACA GAGGGGGCGT AGTGCTAGAA GAAGCCGAAG AGAAACGCCA TTATGCCTAT   240

GGAGTCGTTT CTTCAAAGGA AATCTATATC TGCTAGTTTT TGGGTTTGTC TATCTTTTGT   300

CTGTTCCTTT TTTGATGAAG TTTGTCCTTT ATCCAGTACC TTATCAAGAA CGTAATCGTC   360

TTGCTGATTT GGTAAAAGAG GAGACAAATA CGGAAGATGC TATCTCATGC ATGGGATGAT   420

ACTGCGACTC TTTATCGTAA GAGTGAGCGC TTGTCCCATC GGCGATTTTG TCCCCGTTGC   480

ACTATACAGC AACTGAGGAA AATCGTAATA AGTTACTTAA TGACTTGAAA GAAAAACAAC   540

CTAAGGTGAT TGTGGTAAAT GATAAGGTGG TAGTCTGGTC TGAAGTGGAA ACACTCTTAA   600

AAGAAAATTA CCAACAAGTA AAGACTGATT ACTCAGAGTT TAAAGTCTAT AAAATTAAAT   660

AACCAAATCA ATATCTTGTG TATTTTTAAA AATTTTAGGA TTTTTAACAC AAGATATTGA   720

TTTTTCTTTT TAGAGTGGTA TAATACTTTT TAGAAAGAAC ATTTTAGAAA AGAGCATGCA   780

TATGATTGCA CTAGAAGAAA AAATTACAAT TTTGCCAACT CTCTTCGTCG AGAAACGAGA   840

TGGGAGACGT GTTGTATTTG ATGTGGACAA GATTGACAAG GCTCTCCACA AGGCGGCTGA   900

CAAGGTTATG GATGTGACAC CCCTGGTTGA AAAATGCCTC AATGATCTGA CTGAGCGAAT   960

TATTACAGAA ATTCATAGTC GCTTTCCACA GGGAATTAAG ATTTACGAAA TTCAAAATAT   1020

CGTAGAACAT GAACTCCTTG AAGCCAAAGA ATATGCGCTG GCTGAGGAGT ATATTACTTA   1080

TCGGACACAG AGGGATTTTG AGCGCTCAAA AGCGACGGAT ATCAACTTTA GTATTCATAA   1140

ACTTCTCAAC AAAGACCAGA CAGTTGTCAA TGAAAACGCT AATAAAGACA GTGATGTCTT   1200

TAACACTCAG CGTGATTTGA CAGCAGGGAT TGTTGGGAAA TCAATCGGAC TGCAAATGCT   1260

TCCTAAGCAC GTAGCCAATG CCCACCAAAA GGGGGATATC CACTATCACG ATTTGGACTA   1320

CAGTCCCTAT ACCCCTATGA CCAACTGCTG TTTGATTGAT TTTAAGGGTA TGTTGGAAAA   1380

717

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TGGTTTTAAG ATTGGAAATG CAGAGGTAGA GAGTCCCAAG TCTATCCAGA CTGCGACAGC       1440

ACAGATTTCT CAAATCATTG CCAACGTTGC TTCTAGCCAG TACGGTGGCT GTTCAGCTGA       1500

CCGTATCGAT GAAATTTTGG CGCCTTATGC AGAGAAGAAT TATCAAAAAC ATCTCAAAGA       1560

TGCAGAAGAG TGGGTATTGC CTGAAAAACA GGAAGATTAC GCTTGGAAGA AAGCGCAAAA       1620

GGACATCTAC GATGCCATGC AATCTCTTGA GTATGAAATC AATACTCTCT TCACTTCAAA       1680

TGGACAAACA CCTTTTACTT CGTTAGGTTT TGGTCTGGGA ACCAGTCGTT TTGAACGAGA       1740

AATTCAAAAA GCTATTTTAA ACATTCGCAT CAAGGGTCTT GGTTCAGAAC ACCGTACGGC       1800

TATCTTTCCT AAACTTATCT TTACGCTTAA AAGAGGCCTC AACTTAGAGG AAGGAACTCC       1860

CAACTATGAC ATCAAGCAGT TGGCTCTAGA GTGTGCAACC AAGCGGATGT ATCCAGACGT       1920

CTTGTCTTAT GATAAGATTG TTGATTTGAC AGGTTCTTTC AAGGTGCCTA TGGGCTGCCG       1980

TTCTTTCCTT CAAGGGTGGA AGGATGAAAA TGGTGTAGAA GTCAATTCAG GTCGCATGAA       2040

TCTGGGTGTT GTGACGGTTA ATCTGCCTCG TATTGCTCTT GAGTCTGAAG GTGATATGAA       2100

TAAGTTCTGG GAAATCTTCA ACGAGCGAAT GAATATCGCA GAAGATGCTC TTGTTTACCG       2160

TGTCGAACGC ACTAAAGAGG CGACACCAGC GAATGCTCCT ATTCTTTATC AGTACGGTGC       2220

TTTTGGCCAT CGTCTAGGTA AAGAAGAAAG TGTTGACCAG CTCTTTAAGA ATCGTCGTGC       2280

GACCGTTTCG CTGGGCTATA TCGGCTTGTA TGAAGTAGCG ACAGTTTTCT TTGGTAACAG       2340

CTGGGAAAGT AATCCAGATG CTAAGGAATT CACGCTAGAC ATCATTCACG ATATGAAACG       2400

CCGTGTAGAA GAGTGGTCAG ACCAATATGG CTACCATTTC TCTATCTACT CAACACCATC       2460

CGAAAGTCTG ACAGACCGTT TCTGCCGACT AGATATAGAC AAGTTTGGCT CTATTCCTGA       2520

TATCACAGAC AAGGAATACT ACACCAACTC TTTCCACTAC GATGTTCGTA AAAATCCAAC       2580

ACCGTTTGAA AAATTGGACT TTGAGAAAGT CTATCCGGAA GCAGGTGCGT CAGGTGGTTT       2640

CATCCATTAT TGTGAGTATC CAGTCCTTCA GCAAAATCCA AAGGCCTTGG AAGCTGTCTG       2700

GGATTATGCT TATGACCGTG TAGGCTATCT AGGCACCAAT ACTCCGATTG ACCGTTGCTA       2760

CAAGTGTGAC TTTGAAGGGG ATTTTGAACC AACTGAGAGA GGGTTTGCTT GTCCAAACTG       2820

TGGCAATAGC GACCCTAAAA CAGTAGATGT GGTGAAACGA ACTTGTGGCT ACCTAGGTAA       2880

TCCTCAAGCA AGACCGATGG TCAACGGGCG TCACAAGGAA ATCGCTGCGC GTGTCAAACA       2940

TATGAATGGT TCAACGATTA AAATAGCTGG GCATCAAGTA ACAAATTAGA AAGAAATGAA       3000

ATGGGAAAAT ATCAACTAGA CGATAAGGGG CGCGCACAAG TGACCCGTTA TCACGAGAAA       3060

CACTCTAAAG GTGGAGCTGG TAAGAAAGAA CGCTTGCTTA GCTTCAGAGA ACAATTTTTA       3120
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718

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AACAAGAACA AGAAAAAATA AAAGTGAGAG CCAGCTCTCG CTTTTCTCAT AGTGGGAGGT        3180

AAGGATGGAA TTACGCAGAC CAAGATTAGC GGATAAGAAA GCTGTTTTAG ATATGATGAC        3240

AGAGTTTGAA AAATTTCAGT CGCCTCACGA CGGCGGTTTC TGGGATACAG AGAACTTTGT        3300

GTATGAAGAC TGGTTAGAAA GCAATCAGGA ACAGGAAATG GGGATTAATC TGCCTGAAGG        3360

ATGGGTTTCT GCAATTCAGT TAGTGGCTTT TTCTGAGAAA GGTCAAGCAG TTGGATTTCT        3420

TAATCTCCGG TTGCGCCTCA GTAACTTTCT ACTAGAAGAA GGTGGCCACA TTGGCTACTC        3480

CATTCGTCCA TCTGAAAGAG GCAAGGGTTA TGCAAAAGAG ACTCTCCGTC AGGGCTTGCA        3540

AGTTGCTAAG GAAAAGAACA TCAAGAAAGC TCTGGTGACC TGTAGTGTGA ATAATCCTGC        3600

TAGCAGAGCA GTCATTCTAG CAAATGGTGG AATATTTGAG GATGCTCGCA ATGGAGTCGA        3660

GCGTTATTGG ATAGAGGTAG CGAATGAATA ATCCAAAACC ACAAGAATGG AAAAGCGAGG        3720

AACTTAGTCA AGGTCGTATC ATTGACTACA AGGCCTTTAA CTTTGTGGAC GGCGAAGGCG        3780

TGCGCAACTC TCTCTATGTA TCAGGCTGTA TGTTTCACTG CGAGGGATGT TATAATGTTG        3840

CGACTTGGTC TTTTAATGCT GGCATTCCCT ATACAGCAGA ATTAGAAGAG CAGATTATGG        3900

CAGACCTTGC CCAACCCTAT GTTCAAGGCT TGACTTTGCT GGGAGGGGAG CCTTTTCTCA        3960

ATACTGGGAT TCTCTTGCCA CTTGTTAAGC GGATTCGGAA GGAATTGCCA GACAAGGACA        4020

TCTGGTCCTG GACCGGCTAC ACTTGGGAAG AAATGATGTT GGAAACTCCA GATAAACTGG        4080

AATTCTTGTC ACTGATTGAC ATTCTTGTCG ATGGAAGATA TGATCGAACT AAGAGAAATC        4140

TTATGCTCCA GTTTCGAGGT TCATCTAACC AACGAATTAT CGATGTGCAA AAATCGCTCA        4200

AAAGTGGGCA AGTAGTGATT TGGGACAAGC TCAATGACGG AAAAGAAAGC TATGAACAGG        4260

TGAAGAGAGA ATGAAGAAAA AGGACTTAGT AGACCAACTA GTCTCAGAGA TCGAGACGGG        4320

GAAAGTCAGG ACACTGGGAA TATACGGTCA TGGAGCTTCA GGTAAATCAA CCTTTGCACA        4380

GGAATTGTAC CAAGCTTTAG ATTCTACTAC AGTAAATTTG CTAGAGACAG ATCCTTATAT        4440

CACCTCAGGA CGCCATCTGG TAGTACCCAA GGACGCGCCG AATCAAAAGG TGACAGCCAG        4500

TCTGCCAGTG GCGCATGAAC TGGAGAGTTT GCAGAGAGAT ATCCTTGCTT GCAGGCGGGT        4560

ATGGATGTCT TGACAATTGA AGAACCTTGG AAGGCTAGTG AGGTCTTGTC TGGAGCCAAA        4620

CCAATTTTGA TTGTCGAAGG GATGTCTGTT GGCTTTCTAC CCAAGGAACT CTTTGAAAAA        4680

ACCATCTGTT TCTACACGGA TGAGGAGACC GAATTAAAGC GACGCCTTGC TAGAGATACG        4740

ACTGTGAGAA ATCGCGATGC GG                                                4762
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(2) INFORMATION FOR SEQ ID NO: 92:

        (i) SEQUENCE CHARACTERISTICS:

719

(A) LENGTH: 3832 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

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GATGCAGGTT TCGACCCACA TATTCCAGAA AATTACTTTA AAGATGATGA TGTTAATCAG      60

GTACCTTGTC TTTGTTGGTC TTCATCTGCA GCCCTCTTTT TCAGTAATTG GGTAGACCAT     120

GCGGTCTATC AGGAGACGCC TTTTGATTGG AGAAAGATAG AAGATGATGC ATCTGCATAT     180

GGGTATTTAT AAGAGGAATT ATGACATATT TAGACGCTTT TAAATCAGGT ACCTTGGTTT     240

TACCGAGTGC CCTGCTCTTG CATTTTAAGG AACTCTTTCC TTCTAGCGAC GATTTTCTGG     300

TTTGGCAATT TTTCTATTTG CAAAATACGA CAGGCTTAGA AGAAATGTCG CCAAGCCAGA     360

TTGCTGAAAG GATTGGCAAG GAAATTTCGG ATGTCAACCA GTCCATTTCT AATCTGACGG     420

AAAGGGGACT GCTCCAGTAT CGTACTATCG AATTAAATGG CGAAATTGAA TTGCTCTTTG     480

ATGCTAGTTT GGCCTTGGAA CGTTTGGATG ACCTGTTTGG AGCAGTTCAT TCAAGTTCAG     540

ACCAGCTAAC ACCTCAAAAC CAGCTCAAGG ATTTGGTGGA AACCTTCCAG CAGGAGTTGG     600

GACGATTGTT GACGCCTTTT GAGATTGAGG ATTTGACCAA GACACTAAAG GAAGATGGAA     660

CCAGTGCTGA CTTGATTAAG GAGGCTCTTC GTGAAGCTGT TTTGAATGGA AAACCAAACT     720

GGAAGTACAT TCAGGCGATT TTGAGAAACT GGCGCCATGA AGGAATCAAG AGTGTGGCTC     780

AAATTGAGGC CAAGAGAGCA GAAAGAGAAG CAAGCAATCC TCAGTTGACA CAGGTATCTG     840

CAGATTTCAT AAATGCCATG GATCTCTGGA AGGATTAATC CATGCAAGTA GGCTTGAAAT     900

CCGAGTAAGA TTTGCAAGCT GTGTATAATT GTGATAGAAT AAATAGAAAA TAAATTGAAA     960

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AATCCAGAAG AAGCTAAAGC ATTCGTTGAA GCAGTTGCAT CAAAACTTCC TTCATCAGAT    1080

CTTGTTGAAG CAGGTATCGC TGCTCCAGCT CTTGATTTGA CAACTGTTCT TGCTGTTGCA    1140

AAAGGCTCAA ACCTTAAAGT TGCTGCTCAA AACTGCTACT TTGAAAATGC AGGTGCTTTC    1200

ACTGGTGAAA CTAGCCCACA AGTTTTGAAA GAAATCGGTA CTGACTACGT TGTTATCGGT    1260

CACTCAGAAC GCCGTGACTA CTTCCATGAA ACTGATGAAG ATATCAACAA AAAAGCAAAA    1320

GCAATCTTTG CGAACGGTAT GCTTCCAATC ATCTGTTGTG GTGAATCACT TGAAACTTAC    1380

GAAGCTGGTA AAGCTGCTGA ATTCGTAGGT GCTCAAGTAT CTGCTGCATT GGCTGGATTG    1440

ACTGCTGAAC AAGTTGCTGC CTCAGTTATC GCTTATGAGC CAATCTGGGC TATCGGTACT    1500
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                                           720
GGTAAATCAG CTTCACAAGA CGATGCACAA AAAATGTGTA AAGTTGTTCG TGACGTTGTA    1560

GCTGCTGACT TTGGTCAAGA AGTCGCAGAC AAAGTTCGTG TTCAATACGG TGGTTCTGTT    1620

AAACCTGAAA ATGTTGCTTC ATACATGGCT TGCCCAGACG TTGACGGTGC CCTTGTAGGT    1680

GGTGCGTCAC TTGAAGCTGA AAGCTTCTTG GCTTTGCTTG ACTTTGTAAA ATAATCAGTA    1740

AGTAGCAAAA GCTAGGTGGA ACAGCATTCA GATGTCTGTT ACATTTTTTA TAGGAGAGAA    1800

AGATTGAAAA CAAAAATTGG ATTAGCAAGT ATCTGTTTAC TAGGCTTGGC AACTAGTCAT    1860

GTCGCTGCAA ATGAAACTGA AGTAGCAAAA ACTTCGCAGG ATACAACGAC AGCTTCAAGT    1920

AGTTCAGAGC AAAATCAGTC TTCTAATAAA ACGCAAACGA GCGCAGAAGT ACAGACTAAT    1980

GCTGCTGCCC ACTGGGATGG GGATTATTAT GTAAAGGATG ATGGTTCTAA AGCTCAAAGT    2040

GAATGGATTT TTGACAACTA CTATAAGGCT TGGTTTTATA TTAATTCAGA TGGTCGTTAC    2100

TCGCAGAATG AATGGCATGG AAATTACTAC CTGAAATCAG GTGGATATAT GGCCCAAAAC    2160

GAGTGGATCT ATGACAGTAA TTACAAGAGT TGGTTTTATC TCAAGTCAGA TGGGGCTTAT    2220

GCTCATCAAG AATGGCAATT GATTGGAAAT AAGTGGTACT ACTTCAAGAA GTGGGGTTAC    2280

ATGGCTAAAA GCCAATGGCA AGGAAGTTAT TTCTTGAATG GTCAAGGAGC TATGATGCAA    2340

AATGAATGGC TCTATGATCC AGCCTATTCT GCTTATTTTT ATCTAAAATC CGATGGAACT    2400

TATGCTAACC AAGAGTGGCA AAAAGTGGGC GGCAAATGGT ACTATTTCAA GAAGTGGGGC    2460

TATATGGCTC GGAATGAGTG GCAAGGCAAC TACTATTTGA CTGGAAGTGG TGCCATGGCG    2520

ACTGACGAAG TGATTATGGA TGGTACTCGC TATATCTTTG CGGCCTCTGG TGAGCTCAAA    2580

GAAAAAAAAG ATTTGAATGT CGGCTGGGTT CACAGAGATG GTAAGCGCTA TTTCTTTAAT    2640

AATAGAGAAG AACAAGTGGG AACCGAACAT GCTAAGAAAG TCATTGATAT TAGTGAGCAC    2700

AATGGTCGTA TCAATGATTG GAAAAAGGTT ATTGATGAGA ACGAAGTGGA TGGTGTCATT    2760

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AACCGTCTGG GAATTCCTTA TGGTGTCTAT CTCTATACCT ATGCTGAAAA TGAGACCCAT    2880

GCTGAGAGTG ACGCTAAACA GACCATTGAA CTTATAAAGA AATACAATAT GAACCTGTCT    2940

TACCCTATCT ATTATGATGT TGAGAATTGG AATATGTAA ATAAGAGCAA GAGAGCTCCA    3000

AGTGATACAG GCACTTGGGT TAAAATCATC AACAAGTACA TGGACACGAT GAAGCAGGCG    3060

GGTTATCAAA ATGTGTATGT CTATAGCTAT CGTAGTTTAT TACAGACGCG TTTAAAACAC    3120

CCAGATATTT TAAAACATGT AAACTGGGTA GCGGCCTATA CGAATGCTTT AGAATGGGAA    3180

AACCCTCATT ATTCAGGAAA AAAAGGTTGG CAATATACCT CTTCTGAATA CATGAAAGGA    3240

ATCCAAGGGC GCGTAGATGT CAGCGTTTGG TATTAAGCGA TGATTTGAAA GAGGGATGTG    3300
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721

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ATAGTAGCAC CCTCTTTTTC TTTGTTTTAT GATAGTTCAT CCTCGAGTAA ATTCAAGTTC    3360

TTGCTCGGAA ATGAAGCTTA TATAGTAGAT TGAATATAGA CAAATACCTT GTGATTGGTA    3420

AAACATTTTA GAAATTCATT TACCTTTCCT AATCGACTTG GTTTCATCTT ATTTCAATCT    3480

ATTATAGTAT TGGGGAATTT CTTCAAACCA CATCAGCTTG GTCAGTTCTA CCTGCGACCT    3540

CAAAACTTGT GCTTTGGTCA AGCTGGGTTT AGTTTCCTAG TTTGCTGATG GATTTCCATT    3600

GACTATAAGC ATCCAACCCT CTTTTTGTCT TCTAAAGAAT TCTTAAATTA TCAGTCTATT    3660

GCAACTTTTC TCATATAAGT TCTTTGTCTT GCTATTGGTT TTCCTTAGTA GTATACTAAG    3720

GTAGTAATCA TTAAGAAGTG GTTACAAAAA ATAATGAATG AGGTAAAGAA AATGGTAGAA    3780

TTGAAAAAAG AAGCAGTAAA AGACGTAACA TCATTGACAA AAGCAGCGCC GG           3832
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(2) INFORMATION FOR SEQ ID NO: 93:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10690 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

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TGAAAAAATC CTCATGAACC TGGCGCCAAT AGACAAGTGT CTTGTTTCCC TCACCTTCCT     60

TATAGGCATG GTCAGCTGAC ACTCGATTGA AGGGTTTAAC AGAAACCTTT GTAATTTCGA    120

CAATGCAGAC AGCCTGATTT TGACTATCTA AAATGACATC GAAGGTCCCT ACTTGGGGAA    180

GTGGTTCGTC TTCTAGCACA TAGAGGTCAT AGGCTGATGC TGTTGCTGTC TTTTCTCCTT    240

TAAACACCAA ATCCGCTAAA AGGTCTGGTT CAACTCCAAA AGCCCAGGCA TCGATTTCAT    300

CTCCGATCAA AGGATTGATT TGCTTGTATT TATTCCACAT TTCTTGCGGT ATCATGGGTG    360

CTCCTTTGTA ATTTTTTACT TTCTTCTTTT ATGTGTTTAA GATGATCTGG ATGGTCAATC    420

TCTAAATCAA AAATCTCTGG AATAGAACTG TAGTGGATAA TGCACTTGAT ACCCAACTGA    480

TTCATTTTTT GTATGAAAGA AGTATTCAGA TAGCCTGCTA CAGCAAAATC AATCTTGTTC     540

TTTCTTGCTT TATCCTGCAT ATCTCTTAGC ATATCTAACA TTATTGGACT TTCCATATCA    600

TGCCATTGAC TGTTTCTCAT AGTCGCAAAA ACAAAGGAAG TCAAATCATT CATTCCAACT    660

ACAATCTTTG AAATGCCCGT TTCCAGTATA CTAGATAAGT CAAAATACGC TGACGGTAAT    720

TCAATCATCG TTCCGACTTT CCCAGTAAAA CCCTGCTGAC GCAATACTGT AATAGCTTGT    780

TTTAATTGGT CGGCATCATT GACAAAAGGA AAGATAACAG ATAGATTGGG GTTGGTTTGA    840
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722

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TAAACTTCTG TAACGACATG TGCTTCAGCC TGAAATTCAT CCAAACACGC CAGTAAACGC      900

CTAGTTCCTC TATAGCCAAA CAAGGGATGC CCTTCGTCAA AAAACTCTTT AGTCCCCACT      960

AAACAATTGG CTTCTGTATT CGTTAATTCA GTAAAACGAT ACCAAACTTC CTTACCTAAG     1020

TAAAAGGAGC AAATAGTATC AAGATAATCT TTCACAAATT CCTGACAACT TTGTAATAGT     1080

ATATTTTGAT TGAGCTCTCT CAATAAGTAT TCCCCACGAA TCATGCCGAC GTGGTGAAAT     1140

AGTTGAGGAT AAATTTTTTC AAGAATTTTT TCGCCACTAA GGGCAAGTTG ATTTCTCATC     1200

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AATATATCCA AGTGAATCAT CGCACCATC AGACACAGCT TCCGAAATCG TAACTTGAGG     1380

TGCACTCTCA TTCATTTCAA CATCATACAA GGCTATGACA TGGTGAACCA TAAAATTTTT     1440

TAACTCTTCC CTGACGAAAA CATCGTAGAT TCGAGGATTA GAGTAGCTTC TAACAGTAAA     1500

TCCCGTCTCT TCCATAACTT CTCTAGTCAG CGTTTCCGTC AGTCCTTCAC CAAGTTGCTG     1560

ACTGCCTCCA GGTAGATCAT ACCGATGTTG ATAAGGGCCT CTCGTTTTTT CAATGCAAAG     1620

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CACCTTGGTC AACTCCATAA ACTTGATAGC CCTTCTCTAA AAAGAGGCGA GCTTGAGCCA     2340

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TCCGTTGCCA AAACATCACA AACTGTCGGG CTCCACATGG AAAAACCTTC TCCTTCGCCA     2460

GAAACGTTGA TTAGGAAATA AGGTGTCATT TCAAGTGCAA GCCCATTTTG CTCGATGGTA     2520

TCAAAGAGTT GGACATAGTT TTCCGCACCT CCCCAACCAG TTCGTACATA TTTTCTCTTA     2580

GCCTTTAACC CAGGCAGGAT CTCTTCAAAT GTCATGTTTT TCTCCTTTAA TTCTACATTC     2640
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723

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TTCATTTAAT TATAGCAAAA AACCGCTTTA TACGGCTTTT TGAATGTGAG TTATTCAAAC      2700

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TTGTTAAGCT AAAGTTTGCC GCTCGGCTAA CTTCTCTCAA GTGCTTAGGA TTTGTTGTAC      2820

CTACGACTGC CTGCATTTTT GCTGGATAAC GCAATATCCA AGAAATGGCA ATAGTTGAAG      2880

AGGTTACTCC ATATTTAATA GCTAAACGAT CAAGTACTTG ATTTAAAGCT TGAAATTTCT      2940

CATTTCCAAC AAAATTCCCT TTAAAATACC CGAATTGTAA GACAGACCAT GCTTGAATGA      3000

CCACATCGTG TAATTGGCAA TATTCAAAAA TGCTGCCATC TCGCATAGCT GCTTGACTAT      3060

CTTCCATATT AACATGAAAA GCTGATTCAA ATCCTGGAGT AAAAGCCGCA CTCAATTGTA      3120

GCTGATTAAC AGCTAACGGC TGCTTGACAT CTTTTTTAAG CAACTCCATC ATCATAGGAT      3180

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AATCAAAATA GGTAAATTCT TCAATGCGAA TGCCACATTT GGACTGAATC CACATCTTTT      3420

CTCTTAAATC TGGACGATTT TTTAGGACAA GACCTAACAG TTCTTCACAA CGACCACGAC      3480

CATAAATATC AGCCAAGTCG AAGGCATTGA TTCCAACAGA AAGTGCTGTT TCTACAAGCT      3540

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ACTCCATTTT ATCTTCTTAA ACCCACGGAA CAAGACAAAG ATTCCAATAA AGAGGACAGC      3780

TAAAGGAATA ACTTTTGTAA GGAAAACATT TGAAATTCCC ATCCACTCAT AATAACGGAG      3840

CAGAGAACCC ACCACAAGAT GGGCAATAAT CATACTGACA AATGGACGAA AGACCGCTTC      3900

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AGCCGGAATA TAAAAGGCTC CTTCTTGTAT GAAGCTTGCC ATTCCTACAT ATCCTAAAAC      4020

AACTAGAAGA ACTATAGTCC CAACAACAAT GTAAGTGCCA ATTTTCATTT TAGGAGAATC      4080

TTGGACTAAA CTTCTTCGTA AAATTGTGGC CACAAGTCCA AATCCAATCA GAAAAATAAG      4140

AAGTTGCCCT AAAAATGTGA GCAAATTGAC TGTTAAGAGA GGACCTTTAG AAAAATCACT      4200

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GATAGAACTG CGAGGTGCTC CCTTGAGAAT CTCTTTCATT ATTTTTTTTAG GATTCTTACC      4320

TAGATAATCC TCTGCACTCA TGCCATCTCG TTCTGCTTCT GAGAAATCTA GCATCATCAA      4380
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724

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TTCTTCGTAA TACTTCATTT TCTTCATGGT TTAACCCCCA TTCTTAATCC CTTCTACTTT   4560

TTGACTCAAA TCGTCCCATT GTTGCCAAAA GACTGAGACA CGCTCTTCTC CTTCTTTCAT   4620

TAATGAAAAA TACTTCCGAT CTGGACCATC TGGCGACGGG CGCATGTCGC CTCTTATCCA   4680

TTGATTTTTT TCTAACTTTT GCAACAAAGG ATAAATAGTT CCTGGAACGA TAGTATCAAA   4740

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ATAGTCAACT GCTTCCATGT GTGTATGGAA GTCTGCGATT GATTGTwCTG CAACCTCAGC   6120

AAGAACATGA TCATATTCAG TCACACCTTC TACATAGGCA GGGATTTGTC CATCAAAGTA   6180
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725

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CTTATTAATC ATGGAAACCG TACGGTTAAG GAGGTTCCCA AGGTCATTAG CCAATTCATA       6240

GTTGATACGG CCGACATAGT CTTCAGGAGT AAAGGTTCCG TCTGAACCAA CTGGAAGGTT       6300

ACGCATGAGG TAGTAACGAA GTGGATCTAG TCCATAACGC TCTACCAACA TTTCAGGGTA       6360

AACGACATTC CCTTTTGACT TAGACATTTT TCCGTCTTTC ATGACAAACC AACCATGGGC       6420

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TGTACGAGAT ACCGCCAAAT CTTCCAAGCC TGGCTCGATG AAGTTGCGTA GCATTTCATT       6720

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TCCTTTCCAG GCAAATGAAA CCTGTTTTTC TAACACTTCA TTATATCACA TTTTTAATGA       7380

ATTTCAATAG GGAAATCCAT ACAAAAACAA GATAGACGAG TGTCCATCTT GTTGATCTCA       7440

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TGCAAATACA ACGGACTCAT CTGCCACCTG GTATTCTCCC TGTTGTAAGC CTGCAAGCTC       7920
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726

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TGTCATTTTT CGTGCCAGTT CTGGACCCAG AGTTGGGGTT AAACTGGTAT CATTCACTCG    7980

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CCCAATGACC CGGTAACTAA ATCCATTGAC TTCTACAACC TTGTTAATAG CCTCTTGAGG    8160

AGATTCAAAT AAACTAATGG ACAATTCCTC ATCTAGCAAA ATGACACTTG CAAACTCTTT    8220

GAAATCTTGC TCTCTCAGAC TACGACCTGC AATAATTTCA TTCTTAACAG CGTCCATGTA    8280

AGTTCTGTTT CCACCTGTCA AATTAGCATT CTCAACCTTT TTATCTTGAT AGGTCAAGAT    8340

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CAGCCACTTC TTGACCTTCA AGATAATATT CTCCACTGGT TGGTGTATCC AACATGCCAA    9240

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ACAAGAATAG CCTTAGTTTT GCTTTTAACC TCAATGTTGA CAGAAAAACC TTGTTTCAAA    9660

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727

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AGATGAGTAG GCTCATCTTT TAGAGCAGTC TGAGAAGGTT GTCTAAAGAG TAAAATCCCC     10500

CCAGCACCCA ATACAACTAC ACTCGCAGCA CCGATTGCTG CATACAGTTG CCACTTTTTA     10560

GCTTTACCAT TCTTTTTCTT CATAATGAAA CTCCTTTTCT TTTTTACAAT ACTTTGCTAT     10620

TATACCAAAT TTCCCTCCAG CAAACAATAC AGTTCAGGAT TAAACAATCG TTCGGAATTT     10680

TGCTTTTCGG                                                            10690
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(2) INFORMATION FOR SEQ ID NO: 94:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 8195 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

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GAGAAAGCGC CCACGTTTCC CCGAAGGGAG AAAGGCGGAC AGGTATCCGG TAAGCGGCCA        60

GGGTCGGAAC AGGAGAGCGC AACGAGGGAG CTTCCCAGGG GGAAACGCCT GGTATCTTTA       120

TAGTCCTGTC GGGTTTCGCC ACCTCTGACT TGAGCGTCGA TTTTTGTGAT GCTCGTCAGG       180

GGGGCGGAGC CTATGGAAAA ACGCCAGCAA CGCGGCCTTT TTACGGTTCC TGGCCTTTTG       240

CTGGCCTTTT GCTCACATGT TCTTTCCTGC GTTATCCCCT GATTCTGTGG ATAACCGTAT       300

TACCGCCTTT GAGTGAGCTG ATACCGCTCG CCGCAGCCGA ACGACCGAGC GCAGCGAGTC       360
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728

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AGTGAGCGAG GAAGCGGAAG AGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC       420

GATTCATTAA TGCAGCTGGC ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA       480

CGCAATTAAT GTGAGTTAGC TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC       540

GGCTCGTATG TTGTGTGGAA TTGTGAGCGG ATAACAATTT CACACAGGAA ACAGCTATGA       600

CaTGATTACG AATTCGAGCT CGGTACCCGG AAAATCCAGA AAATGCTTGA AAAAAATCCT       660

AGAAGATGGT ATAATACTAA ATTGTAAGGG TTATCACATA TAACTCAAAA AAAGAAAGAA       720

CAAAAGGAGA GTCAAACTAT GGCTTCTAAA GATTTCCACG TAGTGGCAGA AACAGGTATT       780

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CTTGAGTACA AAGGTAAATC AGTTAACCTT AAATCAATTA TGGGTGTTAT GAGTCTTGGT       900

GTTGGCCAAG GTGCTGACGT AACTATCTCA GCTGAAGGTG CAGATGCAGA TGACGCTATC       960

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CGGATTTGTC ATTTGAGACT ATTACAGTCG AAGATACAAA CGCAGAAGAA GCTCGCCTTG      1140

ATGCCGCTCT ACAGGCATCA CAAGACGAGC TTTCTGTTAT TCGCGAGAAA GCAGTAGGTA      1200

CGCTCGGTGA AGAAGCAGCT CAAGTTTTTG ATGCTCACTT AATGGTTCTT GCTGACCCAG      1260

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CTATCTCTGA GACTGGAGAT GCTATGTTCC GCACACAAAT CCGTGCTCTT CTTCGTGCGT      2160
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729

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CTGTTCACGG TCAATTGCGT ATCATGTTCC CAATGGTTGC GCTCTTGAAA GAATTCCGTG    2220

CAGCGAAAGC AGTCTTTGAT GAAGAAAAAG CAAACCTTCT TGCTGAAGGT GTTGCAGTTG    2280

CGGATAACAT CCAAGTTGGT ATCATGATCG AGATTCCTGC AGCGGCTATG CTTGCAGACC    2340

AATTTGCTAA AGAAGTTGAC TTCTTCTCAA TTGGTACAAA CGACTTGATC CAATATACAA    2400

TGGCAGCAGA CCGTATGAAC GAACAAGTTT CATACCTTTA CCAACCATAC AACCCATCAA    2460

TCCTACGCTT GATTAACAAT GTGATCAAAG CAGCTCACGC TGAAGGTAAA TGGGCTGGTA    2520

TGTGTGGTGA GATGGCTGGT GACCAACAAG CTGTTCCACT TCTTGTCGGA ATGGGCTTGG    2580

ATGAGTTCTC TATGTCAGCA ACATCTGTAC TTCGTACACG CAGCTTGATG AAGAAACTCG    2640

ACACAGCTAA GATGGAAGAG TACGCAAACC GTGCCCTTAC AGAATGCTCA ACAATGGAAG    2700

AAGTTCTTGA ACTTCAAAAA GAATACGTTA ATTTTGATTA ATCGAAAGT CCCTGCAACT    2760

CAGTTACAGG GATTTTTTTG ATATTTTAAA AAGAATTTTC AAGAAAATCT TTCTTATAGA    2820

AAGTCCAACC TTGAAAAAGT AGTGGTCAGA ACAAAAAATA CTTAAATGGT TCATAAAATT    2880

CTTGACAAGT TGGATATTTA GGAGTAAACT ATTAACCAGT TAAGTAATAG AGAGGAGTTT    2940

CTGCAATTTA GAAATGAATT GCAACTAGAA ATATCAAATA GAAAGAGAGT TTCGATGAAA    3000

ATTAATAAGA AATACCTTGT TGGTTCTGCG GCACTTTGAT TTTAAGTGTT TGTTCTTACG    3060

AGTTGGGACT GTATCAAGCT AGAACGGTTA AGGAAAATAA TCGTGTTTCC TATATAGATG    3120

GAAAACAAGC GACGCAAAAA ACGGAGAATT TGACTCCTGA TGAGGTTAGC AAGCGTGAAG    3180

GAATCAATGC TGAGCAAATC GTCATCAAGA TAACAGACCA AGGCTATGTC ACTTCACATG    3240

GCGACCACTA TCATTATTAC AATGGTAAGG TTCCTTATGA CGCTATCATC AGTGAAGAAT    3300

TACTCATGAA AGATCCAAAC TATAAGCTAA AAGATGAGGA TATTGTTAAT GAGGTCAAGG    3360

GTGGATATGT TATCAAGGTA GATGGAAAAT ACTATGTTTA CCTTAAGGAT GCTGCCCACG    3420

CGGATAACGT CCGTACAAAA GAGGAAATCA ATCGACAAAA ACAAGAGCAT AGTCAACATC    3480

GTGAAGGTGG AACTCCAAGA AACGATGGTG CTGTTGCCTT GGCACGTTCG CAAGGACGCT    3540

ATACTACAGA TGATGGTTAT ATCTTTAATG CTTCTGATAT CATAGAGGAT ACTGGTGATG    3600

CTTATATCGT TCCTCATGGA GATCATTACC ATTACATTCC TAAGAATGAG TTATCAGCTA    3660

GCGAGTTGGC TGCTGCAGAA GCCTTCCTAT CTGGTCGAGG AAATCTGTCA AATTCAAGAA    3720

CCTATCGCCG ACAAAATAGC GATAACACTT CAAGAACAAA CTGGGTACCT TCTGTAAGCA    3780

ATCCAGGAAC TACAAATACT AACACAAGCA ACAACAGCAA CACTAACAGT CAAGCAAGTC    3840

AAAGTAATGA CATTGATAGT CTCTTGAAAC AGCTCTACAA ACTGCCTTTG AGTCAACGAC    3900
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                                      730
ATGTAGAATC TGATGGCCTT GTCTTTGATC CAGCACAAAT CACAAGTCGA ACAGCTAGAG     3960

GTGTTGCAGT GCCACACGGA GATCATTACC ACTTCATCCC TTACTCTCAA ATGTCTGAAT     4020

TGGAAGAACG AATCGCTCGT ATTATTCCCC TTCGTTATCG TTCAAACCAT TGGGTACCAG     4080

ATTCAAGGCC AGAACAACCA AGTCCACAAC CGACTCCGGA ACCTAGTCCA GGCCCGCAAC     4140

CTGCACCAAA TCTTAAAATA GACTCAAATT CTTCTTTGGT TAGTCAGCTG GTACGAAAAG     4200

TTGGGGAAGG ATATGTATTC GAAGAAAAGG GCATCTCTCG TTATGTCTTT GCGAAAGATT     4260

TACCATCTGA AACTGTTAAA AATCTTGAAA GCAAGTTATC AAAACAAGAG AGTGTTTCAC     4320

ACACTTTAAC TGCTAAAAAA GAAAATGTTG CTCCTCGTGA CCAAGAATTT TATGATAAAG     4380

CATATAATCT GTTAACTGAG GCTCATAAAG CCTTGTTTGA AAATAAGGGT CGTAATTCTG     4440

ATTTCCAAGC CTTAGACAAA TTATTAGAAC GCTTGAATGA TGAATCGACT AATAAAGAAA     4500

AATTGGTAGA TGATTTATTG GCATTCCTAG CACCAATTAC CCATCCAGAG CGACTTGGCA     4560

AACCAAATTC TCAAATTGAG TATACTGAAG ACGAAGTTCG TATTGCTCAA TTAGCTGATA     4620

AGTATACAAC GTCAGATGGT TACATTTTTG ATGAACATGA TATAATCAGT GATGAAGGAG     4680

ATGCATATGT AACGCCTCAT ATGGGCCATA GTCACTGGAT TGGAAAAGAT AGCCTTTCTG     4740

ATAAGGAAAA AGTTGCAGCT CAAGCCTATA CTAAAGAAAA AGGTATCCTA CCTCCATCTC     4800

CAGACGCAGA TGTTAAAGCA AATCCAACTG GAGATAGTGC AGCAGCTATT TACAATCGTG     4860

TGAAAGGGGA AAAACGAATT CCACTCGTTC GACTTCCATA TATGGTTGAG CATACAGTTG     4920

AGGTTAAAAA CGGTAATTTG ATTATTCCTC ATAAGGATCA TTACCATAAT ATTAAATTTG     4980

CTTGGTTTGA TGATCACACA TACAAAGCTC CAAATGGCTA TACCTTGGAA GATTTGTTTG     5040

CGACGATTAA GTACTACGTA GAACACCCTG ACGAACGTCC ACATTCTAAT GATGGATGGG     5100

GCAATGCCAG TGAGCATGTG TTAGGCAAGA AAGACCACAG TGAAGATCCA AATAAGAACT     5160

TCAAAGCGGA TGAAGAGCCA GTAGAGGAAA CACCTGCTGA GCCAGAAGTC CCTCAAGTAG     5220

AGACTGAAAA AGTAGAAGCC CAACTCAAAG AAGCAGAAGT TTTGCTTGCG AAAGTAACGG     5280

ATTCTAGTCT GAAAGCCAAT GCAACAGAAA CTCTAGCTGG TTTACGAAAT AATTTGACTC     5340

TTCAAATTAT GGATAACAAT AGTATCATGG CAGAAGCAGA AAAATTACTT GCGTTGTTAA     5400

AAGGAAGTAA TCCTTCATCT GTAAGTAAGG AAAAAATAAA CTAATGAAAA ATGAAAGTCT     5460

CGATAAAGAG GCTTTCATTT TTATTATGTA TATATGTAAA ATTCTTGACA AGCAATATTA     5520

AAAAGAGTAA ACTATTAACT AGTTAATTAA CCGGTTTATT ACTTTATAGT GAATCAAATA     5580

TACTTAAGAA AAGAGGAAAG AATGAAAATT AATAAAAAAT ATCTAGCAGG TTCAGTGGCA     5640

GTCCTTGCCC TAAGTGTTTG TTCCTATGAA CTTGGTCGTC ACCAAGCTGG TCAGGTTAAG     5700
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731

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AAAGAGTCTA ATCGAGTTkC TTATATAGAT GGTGATCAGG CTGGTCAAAA GGCAGAAAAC    5760

TTGACACCAG ATGAAGTCAG TAAGAGGGAG GGGATCAACG CCGAACAAAT CGTCATCAAG    5820

ATTACGGATC AAGGTTATGT GACCTCTCAT GGAGACCATT ATCATTACTA TAATGGCAAG    5880

GTCCCTTATG ATGCCATCAT CAGTGAAGAG CTCCTCATGA AAGATCCGAA TTATCAGTTG    5940

AAGGATTCAG ACATTGTCAA TGAAATCAAG GGTGGTTATG TTATCAAGGT AGATGGAAAA    6000

TACTATGTTT ACCTTAAGGA TGCAGCTCAT GCGGATAATA TTCGGACAAA AGAAGAGATT    6060

AAACGTCAGA AGCAGGAACA CAGTCATAAT CACGGGGGTG GTTCTAACGA TCAAGCAGTA    6120

GTTGCAGCCA GAGCCCAAGG ACGCTATACA ACGGATGATG GTTATATCTT CAATGCATCT    6180

GATATCATTG AGGACACGGG TGATGCTTAT ATCGTTCCTC ACGGCGACCA TTACCATTAC    6240

ATTCCTAAGA ATGAGTTATC AGCTAGCGAG TTAGCTGCTG CAGAAGCCTA TTGGAATGGG    6300

AAGCAGGGAT CTCGTCCTTC TTCAAGTTCT AGTTATAATG CAAATCCAGC TCAACCAAGA    6360

TTGTCAGAGA ACCACAATCT GACTGTCACT CCAACTTATC ATCAAAATCA AGGGGAAAAC    6420

ATTTCAAGCC TTTTACGTGA ATTGTATGCT AAACCCTTAT CAGAACGCCA TGTGGAATCT    6480

GATGGCCTTA TTTTCGACCC AGCGCAAATC ACAAGTCGAA CCGCCAGAGG TGTAGCTGTC    6540

CCTCATGGTA ACCATTACCA CTTTATCCCT TATGAACAAA TGTCTGAATT GGAAAAACGA    6600

ATTGCTCGTA TTATTCCCCT TCGTTATCGT TCAAACCATT GGGTACCAGA TTCAAGACCA    6660

GAACAACCAA GTCCACAATC GACTCCGGAA CCTAGTCCAA GTCCGCAACC TGCACCAAAT    6720

CCTCAACCAG CTCCAAGCAA TCCAATTGAT GAGAAATTGG TCAAAGAAGC TGTTCGAAAA    6780

GTAGGCGATG GTTATGTCTT TGAGGAGAAT GGAGTTTCTC GTTATATCCC AGCCAAGGAT    6840

CTTTCAGCAG AAACAGCAGC AGGCATTGAT AGCAAACTGG CCAAGCAGGA AAGTTTATCT    6900

CATAAGCTAG GAGCTAAGAA AACTGACCTC CCATCTAGTG ATCGAGAATT TTACAATAAG    6960

GCTTATGACT TACTAGCAAG AATTCACCAA GATTTACTTG ATAATAAAGG TCGACAAGTT    7020

GATTTTGAGG CTTTGGATAA CCTGTTGGAA CGACTCAAGG ATGTCyCAAG TGATAAAGTC    7080

AAGTTAGTGG ATGATATTCT TGCCTTCTTA GCTCCGATTC GTCATCCAGA ACGTTTAGGA    7140

AAACCAAATG CGCAAATTAC CTACACTGAT GATGAGATTC AAGTAGCCAA GTTGGCAGGC    7200

AAGTACACAA CAGAAGACGG TTATATCTTT GATCCTCGTG ATATAACCAG TGATGAGGGG    7260

GATGCCTATG TAACTCCACA TATGACCCAT AGCCACTGGA TTAAAAAAGA TAGTTTGTCT    7320

GAAGCTGAGA GAGCGGCAGC CCAGGCTTAT GCTAAAGAGA AAGGTTTGAC CCCTCCTTCG    7380

ACAGACCATC AGGATTCAGG AAATACTGAG GCAAAAGGAG CAGAAGCTAT CTACAACCGC    7440
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732

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GTGAAAGCAG CTAAGAAGGT GCCACTTGAT CGTATGCCTT ACAATCTTCA ATATACTGTA      7500

GAAGTCAAAA ACGGTAGTTT AATCATACCT CATTATGACC ATTACCATAA CATCAAATTT      7560

GAGTGGTTTG ACGAAGGCCT TTATGAGGCA CCTAAGGGGT ATACTCTTGA GGATCTTTTG      7620

GCGACTGTCA AGTACTATGT CGAACATCCA AACGAACGTC CGCATTCAGA TAATGGTTTT      7680

GGTAACGCTA GCGACCATGT TCGTAAAAAT AAGGTAGACC AAGACAGTAA ACCTGATGAA      7740

GATAAGGAAC ATGATGAAGT AAGTGAGCCA ACTCACCCTG AATCTGATGA AAAAGAGAAT      7800

CACGCTGGTT TAAATCCTTC AGCAGATAAT CTTTATAAAC CAAGCACTGA TACGGAAGAG      7860

ACAGAGGAAG AAGCTGAAGA TACCACAGAT GAGGCTGAAA TTCCTCAAGT AGAGAATTCT      7920

GTTATTAACG CTAAGATAGC AGATGCGGAG GCCTTGCTAG AAAAAGTAAC AGATCCTAGT      7980

ATTAGACAAA ATGCTATGGA GACATTGACT GGTCTAAAAA GTAGTCTTCT TCTCGGAACG      8040

AAAGATAATA ACACTATTTC AGCAGAAGTA GATAGTCTCT TGGCTTTGTT AAAAGAAAGT      8100

CAACCGGCTC CTATACAGTA GTAAAATGAA TGGAGCATAT TTTATGGAGA AGTAACCTTT      8160

CGTGTTACTT CTCTTTTTTA GAAAAACGTA ACAGA                                8195
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(2) INFORMATION FOR SEQ ID NO: 95:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2004 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

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TTTACTAAAA GGAAAAAAGA ACTGATTTCT CAGTCCTTCA TTAATCTTAT TCCACACTAA       60

ATAGGTATGG GTAAACAGGT TGTTGACCTT GGTGAATCTC GACTTCAACG TCTTCGAATT      120

CTTCTACGAT TTCTTGAGCG ATTTCATTGG CAAGTTCTTC GCTTCCGTCT TCACCTACAT      180

AGAAGGTTAC GATTTCACTG TCTTCATCCA ACATATGTTT CAAGGTTTCA GTCAATGT TT      240

GGTGCATATC AGGGTTTGAC ACAAGAATTT TTCCATCCAC CATACCTAAA TTATCGTTTT      300

CATGGATTTC TAAGCCATCG ATCGTTGTAT CACGCACGGC TGTTGTGACG CTTCCGCTAA      360

CGACATCGCT AAGAGCAGCT GTCATACGCT CTTGGTTTTC TTCAATGGAC TTGCTTGGAT      420

CAAAGGCAAG AAGACTTGTC ATACCTTGAG GAAGAGTGCG AGCCTCTACC ACTACCGCTG      480

GTTGCTCCAA AACTTCTGCC GCAGATTGAG CTGCCATGAA GATGTTCTTG TTGTTTGGCA      540

AGAAGATGAT GTTACGGGCA TTAACCTGTT CAACAGCCTT GATAAAGTCT TCTGTTGAAG      600

GGTTCATGGT TTGACCGCCT TCGATAACAT AATCCACGCC TTGAGAACAG AAGATATCTG      660
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733

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CTAGACCTTT ACCAGCCACC ACAGCAATCA AAGCATACTC TTTTTCTTCA GCCGACTTGA        720

TAACTTGAGT AGCTTCTTTC TCAACCTGTG CTTCGTGTTG GTTACGCATA TTGTCAACTT        780

TTACCTTGAC CAAGCTACCA TATTTGAGAC CTTCTTGCAT AACAAGTCCT GGATCTTCTG        840

TATGAACATG GACTTTGACA ATTTCATCAT CGTTAACAAC AAGGAGAGAA TCTCCAAGCT        900

CATCCAAGTA GTTACGGAAT TCATCGTAGT CAAAATCTTT AGCATAGGTT GGACCTTGCT        960

TAAGAGCTAC CATGATTTCA GTACAGTAAC CAAACGTGAT GTCCTCAGTC GCTACGTGAC       1020

CAGCTACAGA CTTATGATGC TCTACATTGA TCATCTCACT CATGTTGGCA GGAGTCGCTA       1080

CAAAGTCCTC AGATGCAATA TATTCGCCAG TAAGGGCTGA AAGGAAACCT TCGTAGATGA       1140

AGACCAATCC TTGACCACCT GAGTCCACAA CGCCAACTTC TTTCAATACT GGAAGCATGT       1200

CTGGTGTTTT AGCTAGAGCT GTTTTAGCAC CTTCCAAGGC TGCGCGCATG ACTTCAACAG       1260

CGTCATCTGT TTGCTCAGCT TTTTTCTTAG CACCGATAGC AGCTCCACGA GAAACTGTTA       1320

AAATCGTTCC TTCAACAGGT TTCATCACTG CCTTATAGGC AACTTCCACA CCTGATTGGA       1380

AGGCCAGAGC CAAGTCTTGA CCTGTTAACT CGTCTTTATC CTTGATAGCT TGGGAAAATC       1440

CACGGAAAAG CTGAGACGTA ATCACTCCTG AGTTCCCACG CGCACCCATC AAAAGCCCTT       1500

TGGCAAGAAT GCTCGCTACT TCTCCAACTG TAGAAGCTGG CTTGTCTGCA ACTTCTTTAG       1560

CACCATTTTC AATGGTCATT CCCATATTTG TCCCAGTATC TCCATCTGGA ACTGGAAAGA       1620

CGTTTAATGA ATTGACATAT TCAGCTTGCT TATTCAAGCG AGTTGATGCA GCCTGCACCA       1680

TTTCTTGAAA TAAGCTAGTA GTAATTTTTG ACACGGTTAT TCTCCTACAA CTTTGATATT       1740

TTGAATGTAG ACATTTACAG TCTGAGCAGT AATTCCAAGC TGGTTTTCCA AGCTAAAGGC       1800

AACACGCTCT TGAATGTTTT TTGACACTTC ACTAATCTTT GTTCCGTAGC TTAACACGGT       1860

ATATACATCA ACTGCAATAC TGCCATCTTC GGCTGCCTTT ACGACGACAC CTTTAGAATA       1920

ATTTTCCTTA CCTAGCAGGG CTTGGAAATT ATCTTTGAGG GCATTTTTAC TAGCCATACC       1980

GACCACACCA GAAATCTCAG TTGC                                             2004
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(2) INFORMATION FOR SEQ ID NO: 96:

       (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 11915 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

734

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CCGGGTTGGG CTGTTCGCCC ATTAAAGCGG CACCACAGCT GGGTTCAGAA CGTCGTGAGA    60

CAGTTCGGTC CCTATCCGTC GCGGGCGTAG GAAATTTGAG AGGATCTGCT CCTAGTACGA   120

GAGGACCAGA GTGGACTTAC CGCTGGTGTA CCAGTTGTCT TGCCAAAGGC ATCGCTGGGT   180

AGCTATGTAG GGAAGGGATA AACGCTGAAA GCATCTAAGT GTGAAACCCA CCTCAAGATG   240

AGATTTCCCA TGATTATATA TCAGTAAGAG CCCTGAGAGA TGATCAGGTA GATAGGTTAG   300

AAGTGGAAGT GTGGCGACAC ATGTAGCGGA CTAATACTAA TAGCTCGAGG ACTTATCCAA   360

AGTAACTGAG AATATGAAAG CGAACGGTTT TCTTAAATTG AATAGATATT CAATTTTGAG   420

TAGGTATTAC TCAGAGTTAA GTGACGATAG CCTAGGAGAT ACACCTGTAC CCATGCCGAA   480

CACAGAAGTT AAGCCCTAGA ACGCCGGAAG TAGTTGGGGG TTGCCCCCTG TGAGATAGGG   540

AAGTCGCTTA GCTCTAGGGA GTTTAGCTCA GCTGGGAGAG CATCTGCCTT ACAAGCAGAG   600

GGTCAGCGGT TCGATCCCGT TAACTCCCAT TTTAGCGGGT GTAGTTTAGT GGTAAAACTA   660

CAGCCTTCCA AGCTGTTGTC GCGAGTTCGA TTCTCGTCAC CCGCTTTGAA CTTTGTTCTT   720

TGTACCAAGT TTTTGACTTG GGCGCGTAGC TCAGGTGGTT AGAGCGCACG CCTGATAAGC   780

GTGAGGTCGG TGGTTCGAGT CCACTCGTGC CCATAGTGTT TAGTCCATTA CTAGGGGATT   840

GGAATATTAT CTGTTCACTA AGAGGACACG GGCTTGTTCC CGTATAAACT ATTTTGGAGG   900

ATTACCCAAG TCCGGCTGAA GGGAACGGTC TTGAAAACCG TCAGGCGTGT AAAAGCGTGC   960

GTGGGTTCGA ATCCCACATC CTCCTTTTAT ATTAACGCGG GATGGAGCAG CTCGGTAGCT  1020

CGTCGGGCTC ATAACCCGAA GGTCGTAGGT TCAAATCCTG CTCCCGCAAT AAGGCTCGGT  1080

AGCTCAGTTG GTAGAGCAAT GGATTGAAGC TCCATGTGTC GGCGGTTCGA TTCCGTCTCG  1140

CGCCATTTAT ATATTTTGGA AGGGTAGCGA AGAGGCTAAA CGCGGCGGAC TGTAAATCCG  1200

CTCCTTCGGG TTCGGGGGTT CGAATCCCTC CCCTTCCATT TTACGGGCAT AGTTTAAAGG  1260

TAGAACTAAG GTCTCCAAAA CCTTCAGTGT GGGTTCAATT CCTACTGCCC GTGTTAATAG  1320

AATTATGGCG GGTGTGGTGA AGTGGTTAAC ACACCAGATT GTGGCTCTGG CATGCGTGGG  1380

TTCGATCCCC ATCACTCGCC TATTTTATAT TGGGGTATAG CCAAGCGGTA AGGCAAGGGA  1440

CTTTGACTCC CTCATGCGTT GGTTCGAATC CAGCTACCCC AGTTACTATT TGCCGGCGTG  1500

GCGGAATTGG CAGACGCGCT GGACTCAAAA TCCAGTGTCC GCAAGGACGT GCCGGTTCGA  1560

CCCCGGCCGC CGGTATAGTA TAGTGTTAGG AACGTTGTTA TTCTTCGTTC CTTTTTTATA  1620

TTATTTTTGG TATAATTATA GTTATTCAAA TTTTATTTAG ATTAAGAAAG TGTAGGGGAG  1680

TATGTCTTGT TCTATCGATT TATTAAAACA TCGGTATTTG AAAAATATTA AAGAAAATCC  1740

TGAATTGTTT GTCGGAATTG AGTTGGAGTA TCCTGTTGCA AGTTTAGAAG GGGATGCTAC  1800
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735

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AGATGTTGAA GTTATGAAGG ATCTATTTCA TTATTTAGTT TCTACTTTGG ATCTCACCGT      1860

AGCAAAGGTA GATGATTTTG GCAATCTGAT CCAGTTAGTA GATCCGATAA GTCAGGATGC      1920

TATTTTATTT GAAGTTTCCT ATACAACGAT TGAGTTTGCA TTTGGTAAGG CTGAAACGAT      1980

TCAAGAGGTC GAAAATCGTT TCAATAATTA TATGAATGTA ATTCAGAGAA AGTTAGCTGA      2040

ATCAAATCAT GCTATTGTTG GCTGTGGTAT CCATCCCAAC TGGGATAAAA ATGAGAATTG      2100

TCCAGTGGCT TATCCACGCT ATCAGATGTT GATGGATTAT TTGAATTTGA GTAGAAATAT      2160

TATTAAATCA GATTTACATC ATTTCCCTGA ATATGGTACT TTTATCTGTG GGAGCCAGGT      2220

TCAGCTGGAT ATTTCAAAAA CCAACTACTT ACGGGTGATT AATGCTTTTA CTCAAATTGA      2280

AGCGGCTAAG GCTTATTTAT TTGCAAACTC TGAATTTTCG GGTGCGGATT GGGATACGAA      2340

AATTTCAAGG GATATTTTCT GGGAAGAATC TATGCATGGT ATCTATCCAG AGAATGTTGG      2400

GGTCAATGCT AGACTCCTTA ATGATGAAAC TGATTTTTTT GACTATCTAA ATCATTCTGC      2460

GATTTTTACT GCGGAACGTG ATGGGCAGAC CTATTATTTT TATCCTATTC AGGCTGGGGA      2520

CTATTTGGCT ACGTCCGAAA TCCAAGCATT TGCTCTGAAT GGGGATGAGG TTATTATTTA      2580

CCCCCAAGAG AAGGATTTTG AAACTCATCG TAGTTACCAG TACCAAGATT TAACGACTCG      2640

AGGAACAGTT GAGTTTCGTA GTGTGTGTAC ACAGCCACTT GATAGGACTT TTGCTTCTGC      2700

AGCTTTTCAC TTGGGATTAT TGGTTAATTT AGACAAGTTA GAAGCTTACT TAGAAACAGC      2760

ACCTTTCTTT AAAGTATTTG GTTATGATTA CAAGTCTTTA AGGAGACAAT TTTCTAAGAA      2820

AAATCTTACA GATGAGGAAG AAACTACGAT TATTGAATTT TCCAAAGACT TACTCCTACT      2880

AGCTGAGGAG GGACTAGTGG TGAGAAATAA GGAAGAAATG ACCTATTTAC AGCCTTTGAG      2940

AGAAGAATTG AGCCTATAAT TTCTCTTATA AAGGGAGAAT TTTCTGAAAA ATCATGATAT      3000

AATGGACGAG ACTATAGATA AAGGATAGAG AGTAATGACA TTAGTTTATC AATCAACGCG      3060

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CGGTTTGTTT ACACCGGATA CTTATCCAAA GGTAGATTTG AACTTTGACA AATTGAAAGA      3180

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TGAGGAGTTG GACTACTGTA TCAACAATGC CTACGATAGC AAATTTGATA CTCCAGCTAT      3300

TGCACCATTA GTGAAATTAG ATGGGCAATA CAATTTGGAA CTTTTCCATG GTTCAACGAT      3360

TGCCTTTAAG GATATGGCCT TGTCTATTTT GCCATACTTT ATGACGACTG CTGCTAAGAA      3420

ACATGGTTTG GAGAACAAGA TTGTTATCTT GACAGCGACA TCTGGTGACA CGGGGAAAGC      3480

TGCTATGGCG GGGTTTGCGA ATGTGCCTGG TACTGAGATT ATCGTCTTTT ATCCAAAGGA      3540
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736

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TGGTGTCAGC AAGATTCAAG AGTTACAAAT GACCACTCAG ACTGGCGACA ATACTCATGT     3600

TATTGCTATT GATGGTAACT TTGACGATGC GCAAACAAAT GTGAAGCACA TGTTTAACGA     3660

CGTGGCTCTT CGTGAAAAAT TGACTACCAA CAAGTTGCAA TTTTCATCAG CTAACTCTAT     3720

GAACATTGGT CGTCTGGTGC CACAAATTGT TTATTATGTT TATGCTTACG CTCAATTGGT     3780

TAAGACTGGT GAAATTGTAG CTGGTGAAAA GGTTAACTTC ACAGTACCAA CAGGAAACTT     3840

TGGAAATATC TTGGCTGCCT TTTATGCCAA ACAAATTGGT TTGCCAGTTG GTAAATTAAT     3900

CTGTGCTTCA AATGACAACA ATGTTTTGAC AGACTTCTTT AAAACACGTG TCTATGACAA     3960

AAAACGTGAG TTTAAGGTAA CAACCAGCCC ATCTATGGAT ATCTTGGTAT CTTCAAACTT     4020

GGAGCGCTTG ATTTTCCATC TTTTGGGAAA TAATGCTGAA AAGACAACTG AACTTATGAA     4080

TGCCTTGAAC ACGCAAGGAC AATATAAGTT GACAGACTTT GATGCAGAGA TTTTGGACCT     4140

CTTTGCAGCT GAATATGCGA CTGAGGAAGA AACGGCAGCA GAGATCAAGC GTGTTTGTGA     4200

GTTAGATTCT TATATCGAGG ACCCTCATAC AGCTGTTGCT TCAGCAGTTT ATAAAAAATA     4260

CCAATCGGCC ACTGGAGATG TAACTAAGAC AGTGATTGCT TCAACAGCTA GTCCATACAA     4320

GTTCCCAGTA GTTGCAGTAG AAGCTGTAAC TGGAAAAGCA GGTTTAACAG ACTTTGAAGC     4380

CTTGGCTCAA TTACATGAAA TCTCAGGCGT TGCAGTGCCA CCAGCAGTTG ATGGGCTTGA     4440

AATAGCTCCA ATTCGTCACA AGACAACAGT GGCAGCTGCT GACATGCAAG CAGCGGTTGA     4500

GGCTTATTTA GGACTTTAAG ACAGAGGGAG CAAACTCGGT TGGGAAACCA ACTGAGTTTC     4560

TTTTCATCAG GAGGAGAGAT TGTTTAAGAA AAATAAAGAC ATTCTTAATA TTGCATTGCC     4620

AGCTATGGGT GAAAACTTTT TGCAGATGCT AATGGGAATG GTGGACAGTT ATTTGGTTGC     4680

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ATTAAGTTTC CTTTTAGGAT TTTTGTCCAT CTTCGCTGGG AAAGAGATGA TAGGACTTtT     4920

GGGGACGGAG AGGGATGTAG CTGAGAGTGG TGGACTGTAT CTATCTTTGG TAGGCGGATC     4980

GATTGTTCTC TTAGGTTTAA TGACTAGTCT AGGAGCCTTG ATTCGTGCAA CGCATAATCC     5040

ACGTCTGCCT CTCTATGTTA GTTTTTTATC CAATGCCTTG AATATTCTTT TTTCAAGTCT     5100

AGCTATTTTT GTTCTGGATA TGGGGATAGC TGGTGTTGCT TGGGGGACAA TTGTGTCTCG     5160

TTTGGTTGGT CTTGTGATTT TGTGGTCACA ATTAAAACTG CCTTATGGGA AGCCAACTTT     5220

TGGTTTAGAT AAGGAACTGT TGACCTTGGC TTTACCAGCA GCTGGAGAGC GACTTATGAT     5280

GAGGGCTGGA GATGTAGTGA TCATTGCCTT GGTCGTTTCT TTTGGGACGG AGGCAGTTGC     5340
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737

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TGGGAATGCA ATCGGAGAAG TCTTGACCCA GTTTAACTAT ATGCCTGCCT TTGGCGTCGC    5400

TACGGCAACG GTCATGCTGT TGGCCCGAGC AGTTGGAGAG GATGATTGGA AAAGAGTTGC    5460

TAGTTTGAGT AAACAAACCT TTTGGCTTTC TCTGTTCCTC ATGTTGCCCC TGTCCTTTAG    5520

TATATATGTC TTGGGTGTAC CATTAACTCA TCTCTATACG ACTGATTCTC TAGCGGTGGA    5580

GGCTAGTGTT CTAGTGACAC TGTTTTCACT ACTTGGGACC CCTATGACGA CAGGAACAGT    5640

CATCTATACG GCAGTCTGGC AGGGATTAGG AAATGCACGC CTCCCTTTTT ATGCGACAAG    5700

TATAGGAATG TGGTGTATCC GCATTGGGAC AGGATATCTG ATGGGGATTG TGCTTGGTTG    5760

GGGCTTGCCT GGTATTTGGG CAGGGTCTCT CTTGGATAAT GGTTTTCGCT GGTTATTTCT    5820

ACGCTATCGT TACCAGCGCT ATATGAGCTT GAAAGGATAG GAAATGCAAA AAACAGCTTT    5880

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GCCAGGTGCG CGTGAGGTGC TAGCTTGGGC AGACGAATCA GGAATTCAGC AGTTTATATA    6180

TACTCATAAG GGGAACAACG CTTTTACCAT TCTCAAGGAC TTGGGGGTGG AATCCTATTT    6240

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TAATCAAGTG ACCGTTGATG ATCAAACTGT TCAGGTTGCA GACCTTTCTC AACCAATTGC    7080
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738

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ACCAAATGGC GGTTCAGGAG CGTTTGAAAA TTGATCAGGC TGCTTTGACA CGGCATTTCA    8280

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TTATTTGTGA TTGGTGCTGC GACTTACGGC TCTTTAACAG CGGATAAAAA AATTATTTTG    8820

AAACAAGGTG GATCAGCTAT TTTGGCCTTG ATTAGTATTT TACTCTTTAA ATACACTTGA    8880
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739

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GACAGGTTTT GAGCCCTTTG GAGGGGAAAA GGGCAATCCA GCTTTGGAGG CCATTAAAGG     9060

TTTACCAGCT GAAATCCATG GTGCTGAGGT CCGTTGGCTA GAGGTGCCGA CAGTTTTTCA     9120

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CGGAACTGGT CAAAAGAATA GTCCCGATAA AGGAGACTAG TAGAGGAAAG AGGTAGGTTT    10320

GAAGTATTTG GCCAAGTATG CTGAAAAATG GCTGTTCTAA AACAGTCCCG TGGATCCGAG    10380

ATAAGGGATT AAGAAAACCA GATAAGATGA CCAGCATACT GGGAAGGATA TAGAGGAGAA    10440

AGAGACGGGG GGTGTCAGCC TGAAAATGTT TTGACTCCTG ACGAATTGTT TTTAAATCAA    10500

TTTTTGGATA GTTCATTCTC TTATTATACC ATAGTTCTTA TACATAGTTC GTGACAGTTC    10560

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740

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ATTGAAGGAG ATGGGTTCGG GAATTATCCT ATCAAACACC TATCATCTCT GGCTTCGCCC    10860

TGGAGATGAA CTCATTGCAC GCGCTGGTGG TCTCCACAAG TTCATGAATT GGGACCAGCC    10920

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GGGAGCGCCA GATAGCTTGA TCGATGGGGT CATTCGTGGG GTGGATATGT TTGACTGTGT    11460

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ATGTAATAAC TATACACGCG CTTACCTTCG TCACCTGCTC AAGGCTGATG AAACCTTTGG    11640

TATCCGCTTG ACTAGCTACC ACAATCTTTA CTTCTTGCTT AACCTGATGA AGCAAGTGCG    11700

ACAAGCCATC ATGGATGACA ATCTCTTGGA ATTCCGTGAG TATTTTGTGG AAAAATATGG    11760

CTATAATAAG TCAGGACGTA ATTTCTAAAA TGGAATTGAT ATAAAAAAAT CCTAAGTTTT    11820

CTCTTAGGAT TTTTCTTCTT TTTTTGATAG AATAAAGTGT ACAATGAAAG GAAGAATAAA    11880

CTCGTATGCG CATTAAATGG TTTTCCTCGA TTAGG                              11915
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(2) INFORMATION FOR SEQ ID NO: 97:

       (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 9069 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: double
           (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

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GAGAGGGCAA CAGTTCTATC GCTTCAAATT TTTTCTTGGT TTGCAGATAT TCAAGAATCG    60

GGAGTTTTTC TATAGTATTC GGCAGATTTA TTACAGCCAA GCATCTCAAA AATACGGACA    120
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741

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GCATCCTCCA TCTTTTTCTG GCCTTCCTTG ACTCTACCTT GCTTGCTATC AAGGAGACCT    180

TCTGCCCACA GATAAACAAT TCGGAAATAG GTCTCATTTT CCTTGTAGAA ATGCTCTTCG    240

ATAACACGTT TAAAATAATA GGCATTGGTA AATTCTTCAC ACTCAATACT AGCTAAAAAG    300

CCATTCAATA GTATAGTATG AAAAAGGTTT CGATTGCCAG ACATTTCCAT TAGAAAATCA    360

GATTTACGTA CCATTTCTCG TACATATCTA GTAAAAAGAG AAACAGATAA AAATGGAGAA    420

CTGACTGAAA ATAAATTGAG TTCATAGATT CCCCAGATCT CGGTAGAAAA CAAATAATCA    480

TGAAGGACTT TTCCTTCCTC TGCTGTTAAG TCTACCCTTT CATCTATGCT CTTCATATAA    540

GACTTGATAA TAATGGCATT TAGAATATGT TTCTGTTTGT TGTGAGAATG GGCATGCTTT    600

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GACTTGTCCA TATTCCAGAA GTCTGTCACG GCTCCGCGTG AAGCAGATGA TACGATGTGG   1740

GCATATTTAC CGAGGACACC ACGGCTGTAA AGTGGTGGCA AGGTTGTTTC TGCCTTGCGT   1800

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742

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TGTCCAACAA	CCAGACCATA	AGTACCACCA	GAGAAACGTC	CGTCCGTCAA	GAGGGCCACC	1980
TTATCTCCCT	GACCTTTACC	AACAATCATT	GAAGAAAGTG	ATAGCATCTC	AGGCATACCA	2040
GGACCACCTT	TAGGTCCAAC	AAAACGAACA	ACGACTACAT	CGCCATCAAC	GATTTCATCT	2100
GTCAGAACGG	CCTGAATCGC	ATCTTCTTCT	GAGTCAAAGA	CCTTAGCTGG	CCCAACGTGA	2160
CGACGCACTT	TAACACCTGA	TACCTTGGCA	ACTGCACCGT	CAGGAGCAAG	GTTCCCGTTC	2220
AAGATGATAA	GCGGACCATC	CGCACGTTTT	GGATTTTCAA	GTGGCATGAT	AACTTTTTGG	2280
CCTGGAGTCA	AGTCTGCAAA	GTCAGCCAAG	TTTTCAGCTA	CAGTCTTACC	AGTACATGTG	2340
ATGCGATCTC	CGTGAAGGAA	ACCATTTGCC	AACAAATACT	TCATAACCGC	AGGGACACCA	2400
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GCAATGGCGA	GCAAGTGAAG	AGTGGCGTTT	GTAGAACCAC	CGAGAGCCAT	CGTTACAGTG	2580
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CCACCGATAG	CGACGAAGGC	ATCCACGTTG	TGACCACTCA	TAGCCGCCTC	GATGGAGTCC	3060
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GAAATCACTC	CCACAATCGA	TGTTTCAAAG	TCCTTATCTG	TCATACCAGT	CGCACGAAGC	3300
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ATTAAAAACA	ACAAAGCGGA	TTAGTGCACT	TTCTGATGAC	CAGAATATGC	TTTTTAATCC	3540
GCTTTCTTTA	AATAACGTAC	TGTAATTTTT	ACAGAAATTC	TTTCAAATAA	GTGTATTTAA	3600
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743

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744

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GACAAAGCCT TTAAATGACT CTCATTATCA ATGGCTGCAA TACAAATCAA CAATCTTACC     7200
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745

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TTATCTTGAT CCAAAAGCGG TTTAGCTGCT AAACGAATCG CCTCCTTCCA TCCTAATTTT    7440

TGCGAACTAA CCTGATAGGT TTCTTTGGTA ATAAGTTGTT CTAGCACTGG TACAATTTCC    7500

TTTCTATCAT TTTTTTGGTA AAGATAATTC TTTAACGCCA ATCTTAATTC CAATTCTTGT    7560

GTAATAATTC CATATCTTTT GACAATATTC AGGATTTGTT CAATCTCAAA ATCTCCATAC    7620

TCTAAATTCG GAAAATCTTT TAACACTAGT TCTACTAGTT GTATTGCTTG CTCTTCAGTC    7680

ATCATAACCG AAACTAGATA ATTTGGCTTT TCTGTCTCCA CCTTTATGGT AGAAAAAACC    7740

ATATCATAGT CACTACTAGC TTTCACCTGT AAATCATCAA TCTTTGAGGT TCCTATAAAC    7800

TCAATTTGAG GAAATAATGC TAATAGATTC TCTTTTAACA TCAATGAAGA ACTAACACCA    7860

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TCAGAAAACA CCGTATCTAT AATTCCCAAA TCAACCACTG TATCCAATAA AATAGTGGTT    8340

ATATCTTGAA TAACAGGAGA TACTAATGTC TCTGAAAGAC ATACTCTTTC AACATCCCTT    8400

TGATACCTAC ACAGAATGAA TACTAAACCG AAAAGGTAAA CTTTTAATTG ATTAACAATA    8460

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GACTTTGGTA AAACCAATTC ATCCGACTTA ATAATATCTG TCAAAGACTG CTTCGTACGA    8880

TTTGATAAAC TATAGCGACC TTGCTTTTTA TCCAGCACTA TCCCTTTATT AGCTAGATAA    8940
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746

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GGCACTAAAT AATCTATTCC TTCTTTGACT TCCTTTATAG GTAAGCTCAC CTTAACAGAT    9000

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TAATCAAAC                                                            9069
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(2) INFORMATION FOR SEQ ID NO: 98:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8654 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

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CGAGACAACA AGATGAAGAA AAATTTGCCC TATCGTTTGT GGCGCTTGCA AGTGTAGCAC      60

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AGGAAAAGAC AATTAAAATC GGGTTTAACT TTGAAGAATC AGGTTCTTTA GCTGCATACG     180

GAACAGCTGA ACAAAAAGGT GCCCAATTGG CTGTTGATGA AATCAATGCC GCAGTGGTAT     240

CGATGGAAAA CAAATCGAAG TAGTCGATAA AGATAATAAG TCTGAAACAG CTGAGGCTGC     300

TTCAGTTACA ACTAACCTTG TAACCCAATC TAAAGTATCA GCAGTCGTAG GACCTGCGAC     360

ATCTGGTGCG ACTGCAGCTG CGGTAGCGAA CGCTACAAAA GCAGGTGTTC CATTGATCTC     420

ACCAAGTGCG ACTCAAGATG GATTGACTAA AGGTCAAGAT TACCTCTTTA TTGGAACTTT     480

CCAAGATAGC TTCCAAGGAA AAATTATCTC AAACTATGTT TCTGAAAAAT TAAATGCTAA     540

GAAAGTTGTT CTTTACACTG ACAATGCCAG TGACTATGCT AAAGGGATTG CAAAATCTTT     600

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AATCGTTGGT GGTGATGGAT TCAACGGTGA GGAGTTTGTA CAACAAGCAA CTGCTGAAAA     840

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TAAAGCCTTC CTTGACGCTT ACCGTGCTAA GTACAATGAA GAGCCTTCAA CATTTGCAGC     960

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AGTTGAAGCA GCAGAAGTTG TAAAACCATA ATAGAAAAAT GTTGAAATAG GGAATGAGCC    1200

TTTGACTCAC TCCCTGTTTC GATATTTAAT ACTCTTCGAA AATCTCTTCA AACTGCGTCA    1260
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747

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GCTCCAACAA CTCGTAAATG GTTTGATTCT AGGTAGTGTT TACGCGCTGT TAGCCCTAGG    1500

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TGGTGCCATT ACTGCAAGTA TTGCTGGGTC ACTTCAGGCA GGATTTATCG GGTCTGTTGT    3000
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748

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CAGGAACAGG AAAAGAACTC GCTTCATCAG AAGAAGTCAG AAAAGCATAT CTAGGTGGCT    4740

AAAACAATCC AGTGGATTGT TTTAGTCGGC AGATGGAGAT TACGAAGTAA TCATCAATAT    4800
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749

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TTGGATGATA CTATTGAAGT GGAAATCCGT GAAGATGATA TCAAGATGGA TACCTTCCGT    6540
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                                    750
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AACAGTTATA TCCGTGGACC GTTCTTGTTA GAAGGAGCCT TTATCGGTTT ATTGGGAGCT    8340
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751

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TCGTTGGTAG GGCAAAATCT ATCCATGATT AGTCCAGATT TATTTAGTCC GTTGATGATT      8460

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CGATTCTTGA AGATTTAGGT AAAATAGCTG CTTTTATGAG GAGATTGTAA AATCTCCTTT      8580

TTTGCTACAA GAGTTTTTGA AAAGAGATGC GCAGAAGAAA AGAGCTTCCA AAGAAGTCCC      8640

CCAGAGAAGA CTTC                                                       8654
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(2) INFORMATION FOR SEQ ID NO: 99:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 19718 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

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TGTCGCGTCA AAATCATTAC TATGGCTATG TATAGCCCTT ACTATGACTT GGCTAAACAC        60

GTTCGCTTTC AAATTTCTAG GCTCAGGCTG AAACAGTCTC CCAGGCTGTT CACTCCCGAA       120

TGCTAAAATC GTTCTTGATC GCTTTCACAT TGTACAACAT CTTAGCCGTG CTATGAGTCG       180

TGTGCATGTC CAAATCATGA ATCAGTTTCA TCGAAAATCC CATGAATACA AGGCTATCAA       240

GCGCTACTGG AAACTCATTC AACAGGATAG CCGTAAACTG AGTGATAAGC GATTTTATCG       300

CCCTACTTTT CGCATGCACT TAACAAATAA AGAAATTCTT GACAAGATTT TAAGCTATTC       360

AGAAGACTTG AAACACCACT ATCAGATCTA TCAACTCTTA CTTTTTCACT TTCAGAACAA       420

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CAAGACCTTC TTACGTTCCA AGATTGGATC TGGGATTGGT ACCGCTGAAA GCAAGGCTTG       960

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752

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CAAGCTGAGG CAAGCTAGAC AAGAGACTCC ATGTATATGG ATGGCGAGGG TCATAGAAGA      2040

CTTCCTCAAC CGTTCCATAC TCAACGATTT CTCCTGCATA CATAACCGCT ACCTTATCCG      2100

CAATACTTGC CACCACACCA AGGTCGTGGG TAATAAAGAT TGTTGTGAAA TGATACTCGT      2160

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CATTTTTTTC TTTTGTCATT TCTACTCCTA TCTATGTGTA CGTGGATCAC TAGCATCCGC      2820
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753

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CGATTTACCG TTACTGTCAG TACCGAACCA ATGCTCCGCA TTTGGCTTGA TATAACGAAC     3480

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755

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756

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757

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758

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759

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760

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761

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AAACAAAATC AACACAACTA GATGCAAAAG AAGCAATTGA TTTAGGCCAT GAAGCAAATA        17580

CCCTCTATCT AGCTTCCTAT CAAACAGCAG GCCGAGGCCG TTTTCAACGT TCCTTCTACT        17640

CACCACAAGG TGGTATTTAT ATGACACTCC ATCTTAAACC AAATCTCCCC TATGACAAAT        17700

TACCATCCTA CACACTACTT GTAGCTGGAG CTGTCTACAA AGCCATTAAG AACCTAACTT        17760

TAATAGATGT CGACATAAAA TGGGTCAATG ATATCTATCT AAACAATCAT AAAATTGGAG        17820

GAATCCTTAC TGAAGCAATG ACCTCTGTAG AAACTGGCTT AGTCACAGAT ATCATTATTG        17880

GAGTAGGTAT CAATTTCACT ATTAAAGACT TCCCTCAGGA ATTAAAAGAA AAAGCTGCCA        17940

GCTTATTTAA AGCTACAGCT CCTATAACAA GGAATGAATT GATCATAGAA ATCTGGCGTG        18000

CTTTCTTCGA AACACCAGCA GAAGAGCTAT TATACCTATA CAAAAAACAG TCATTCATTC        18060

TAGGAAAAGA AGTCACTTTC ACACTAGAGC AAAAAGACTA CAAGGGACTT GCTAAAGACA        18120

TCTCAGAAAA TGGAAAACTT TTAGTTCAAT GTGATAACGG AAAAGAAATC TGGCTAAATA        18180

GTGGCGAAAT TTCTCTCAAT AGTTGGAAGT AAAATAACAC AATTATAATA TAAACGATAT        18240

AAAAATAACT TCAGATTAGT AATTCAATTA AGTTTTACGG ATCTGAAGTT TTATTGGCTC        18300

TAAAAATAAA AAAGAGAGTT ACAGACTCTC ATTAAAACGG AGAATAAGGG ATTCGAACCC        18360

TTGCGCCAGT TACCCGACCT AACGATTTAG CAAACCGTCC TCTTCAGCCT CTTGAGTAAT        18420

TCTCCAATTA ATGGGCACGA GTGGACTCGA ACCACCGACC TCACGCTTAT CAGGCGTGCG        18480

CTCTAACCAC CTGAGCTACG CGCCCAAGTT AAAAAACTTG GTAATTTGAA CAAAGTTCAA        18540

AGCGGGTGAC GAGAATCGAA CTCGCGACAA CAGCTTGGAA GGCTGTAGTT TTACCACTAA        18600

ACTACACCCG CATAAATACT ATCAATAAAA TGGCGCGAGA CGGAATCGAA CCGCCGACAC        18660

ATGGAGCTTC AATCCATTGC TCTACCAACT GAGCTACCGA GCCTTATTGC GGGAGCAGGA        18720
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762

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TTTGAACCTA CGACCTTCGG GTTATGAGCC CGACGAGCTA CCGAGCTGCT CCATCCCGCG    18780

TTAATAATAT AAAAGGAGGA TGTGGGATTC GAACCCACGC ACGCTTTTAC ACGCCTGACG    18840

GTTTTCAAGA CCGTTCCCTT CAGCCGGACT TGGGTAATCC TCCAATATTC AAATGGACCT    18900

TGTAGGACTT GAACCTACGA CCACTCGGTT ATGAGCCGAG AGCTCTAACC AGCTGAGCTA    18960

AAGGTCCGAC AAGATCATTA TAGCGGCGAA GGGGATCGAA CCCCCGACCT CCCGGGTATG    19020

AACCGGACGC TCTAGCCAGC TGAGCTACAC CGCCATGAAT CGGGAAGACA GGATTCGAAC    19080

CTGCGACACC TTGGTCCCAA ACCAAGTACT CTACCAAGCT GAGCTACTTC CCGAGTTAAA    19140

TAGAAAAATG CACCCTAGAG GAGTCGAACC TCTAACCGCC TGATTCGTAG TCAGGTACTC    19200

TATCCAGTTG AGCTAAGGGT GCTCCATATT ATGCCGAGGA CCGGAATCGA ACCGGTACGA    19260

TCGTTACCAA TCGCAGGATT TTAAGTCCTG TGCGTCTGCC AGTTCCGCCA CCCCGGCCTC    19320

TCTAAGCGAA CGACGGGATT CGAACCCGCG ACCCCCACCT TGGCAAGGTG GTGTTCTACC    19380

ACTGAACTAC GTTCGCACTG TTTTCTTCTA TCTAAAAATG CCGGCTACAT GACTTGAACA    19440

CGCGACCCTC TGATTACAAA TCAGATGCTC TACCAACTGA GCTAAGCCGG CTCATTTGTT    19500

ATATCTTAAT GCGGGTTAAG GGACTTGAAC CCCCACGCCG TTAAGCGCCA GATCCTAAAT    19560

CTGGTGCGTC TGCCAATTCC GCCAAACCCG CATATATGAC CCGTACTGGG CTCGAACCAG    19620

TGACCCATTG ATTAAAAGTC AATTGCTCTA CCAACTGAGC TAACGAGTCT AAAATAACTT    19680

GCGTTACCTT AAACGGTCCG ACGGAATCGA CCCGGTAC                            19718
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(2) INFORMATION FOR SEQ ID NO: 100:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4117 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

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CCGTGGAAAA GTCTGGATAG TGAATGGTCT TCACACAATG ACCTGAAAGA AGCCTGAGAA     60

TAATTATGGA GAGTAGCATT CTGAGAGGTG TTAGCAGAAC CATATGACAG AGCTGTTTGA    120

AGAGGGAATA TTGAGGAGAA AAATCCTGAG CCTACCAGTT GGAGTTGGAA AGAGCTGACT    180

GTTAGATCAT GGTTTATTAT CCACAACCTG TGGATAACTT TGTGAATAAG AGAAGTTGCT    240

AAAGAAGGAG ATATATAACG ATGAAGAAAA TCAAACCGCA TGGACCGTTA CCAAGTCAGA    300

CTCAGCTAGC TTATCTGGGA GATGAACTAG CAGCTTTTAT CCACTTCGGT CCTAATACCT    360

TTTATGACCA AGAATGGGGG ACTGGACAGG AGGATCCTGA GCGCTTTAAC CCGAGTCAGT    420
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763

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TGGATGCGCG TGAGTGGGTT CGTGTGCTCA AGGAAACGGG CTTCAAAAAG TTGATTTTGG   480

TGGTCAAGCA CCACGATGGC TTTGTCCTTT ATCCGACAGC TCACACAGAT TATTCGGTTA   540

AGGTCAGTCC TTGGAGGAGA GGAAAGGGCG ACTTGCTCCT TGAAGTATCC CAAGCTGCCA   600

CAGAGTTTGA TATGGATATG GGGGTCTACC TGTCACCGTG GGATGCCCAT AGTCCCCTCT   660

ATCATGTGGA CCGAGAAGCG GACTACAATG CCTATTATCT GGCTCAGTTG AAGGAAATCT   720

TATCAAATCC TAACTATGGG AATGCTGGTA AGTTCGCTGA GGTTTGGATG GATGGTGCCA   780

GAGGAGAGGG CGCGCAAAAG GTTAATTATG AATTTGAAAA ATGGTTTGAA ACCATTCGTG   840

ACCTGCAGGG CGATTGCTTG ATTTTTTCAA CAGAAGGCAC CAGTATCCGC TGGATTGGCA   900

ATGAACGAGG GTATGCAGGT GATCCACTGT GGCAAAAGGT GAATCCTGAT AAACTAGGAA   960

CAGAAGCAGA GCTGAACTAT CTTCAGCACG GGGATCCCTC GGGCACGATT TTTTCAATCG  1020

GAGAGGCAGA TGTTTCCATC CGTCCAGGCT GGTTCTACCA TGAGGATCAG GATCCTAAGT  1080

CTCTCGAGGA GTTGGTCGAA ATCTACTTTC ACTCAGTAGG GCGAGGAACT CCACTCTTGC  1140

TTAATATTCC GCCGAATCAA GCTGGGCTCT TTGATGCAAA GGATATTGAA CGACTTTATG  1200

AATTTGCGAC CTATCGCAAT GAGCTCTATA AAGAAGATTT GGCTCTGGGA GCTGAGGTAT  1260

CTGGTCCAGC TCTTTCCGCA GACTTTGCTT GTCGCCATTT GACAGACGGC CTTGAGACCA  1320

GCTCTTGGGC AAGCGATGCA GACTTGCCCA TCCAGTTAGA ACTCGACTTA GGTTCTCCTA  1380

AAACTTTTGA TGTAATTGAG TTAAGAGAAG ATTTGAAGCT AGGGCAACGA ATCGCTGCTT  1440

TTCATGTGCA AGTAGAGGTG GATGGTGTCT GGCAGGAGTT TGGTTCGGGT CATACTGTTG  1500

GTTACAAACG TCTCTTACGA GGAGCAGTTG TTGAGGCACA GAAGATACGT GTAGTCATTA  1560

CAGAATCACA GGCTTTGCCT TTGTTGACCA AGATTTCCCT TTATAAAACT CCTGGATTAT  1620

CAAAAAAAGA AGTTGTTCAG GAACTAGCAT TTGCAGAAAA AAGCCTAGCT GTGGCAAAGG  1680

GAGAAAATGC CTATTTTACA GTTAAGCGCA GAGAATGTAG TGGTCCTTTA GAAGCTAAGA  1740

TTTCGATTCA ACCGGGGACA GGTGTCCATG GTGTCGCCTA TCAGGATGAG ATTCAAGTCC  1800

TTGCGTTTCA AACTGGTGAG ACTGAAAAAA GTCTGACGCT ACCAACCTTG TATTTCGCAG  1860

GAGATAAAAC CTTGGATTTC TATCTGAACC TAACGGTGGA TGGTCAGCTT GTGGATCAAC  1920

TTCAAGTCCA AGTTTCATAA AAGAAGAACC TTTGCGCGAT GCAAAGGTTC TTTTGGTTAT  1980

TAGTGACTTG GTAACCAGCT GAGGGTGAAA GTTAGTTGTT CAGCTTTTAA GAGGTCTTGG  2040

TGTTGAATAG TTGATACGAG TGTTTTGTCC AGTCGGCATT CTTTGACAAA GTTAAAATGG  2100

TTGTGGTTTT GTTTAGTATG GATATCCAGC CATTTATCTT CTTTAGCGAG GTAGACTCGT  2160
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764

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AGATGGTCAA AGAGAGGGAT TCCGAGGTCA TAGCTTGGTT TTCCTGGACA GGTTGGATAA    2220

AATCCGAGAG CTGACCAGAT GTACCAAGCA GAGAGACTAC CATTGTCTTC ATCTCCAGGA    2280

TAGGCTTCCC AACTTGGGTG AAAAGCTTTC TGACGGAGCG TCTTGATAAG AAGGGCAGTG    2340

TAGTCAGGGT AATCGCTGTA ACGGAAGAGA TAAGGAATGT GGAAACTAGG CTGGTTGGAA    2400

ATGGCTATTT GTCCAAAAGG AGCAGTAGCC ATCTCGCTCA TTTCGTGAAT TTCGTAACCA    2460

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GTTTCTTTTC CACCCATCAG TTGGATTAAG CCAGGGATGT CGTGGAGAAC GCCTAAAGTA    2580

GCTTGAATGG CAGAGCATTC AGCGTAGTCT CGCCCCCAAC TATAAGGAGA GAAGTCAGGG    2640

TGAAAGTTTC CTTGATTGTC TCGTGCTCGC ATGTAACCTG TCTCAGCGTC AAATAGCTGG    2700

CGGTAATTTT GTGAAGCAGC CTTGTAGGTT TCAGCGATTT CTATGTTCTC TAGTTTTTTG    2760

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TGGTGGTCGG TAGAGAGGTA ACCTAGTTCT TGGTATTGGG CTAGTCCGTG GCGGCCATTG    2880

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AGGTCGGGGG TCATGTCCTT GCAGGCGCTA TCTGCGATAA TACCGTCTAA AAGTGTACCT    3000

GGCATCATAC CCCGTTCATC TGGAGCCAGC CATTTTGGAA GGAAACCAGT ATCGCGGTAG    3060

CTATTGAGGA AACCTTCTAA AAAGCGTTGA TAGTGCTCCG GTATGATAAG GGCAAAGAGG    3120

GGGAAGGTGG TGCGGAAGGT ATCCCAGAAA CCATTGTTGC TAAAGAGGAC ACCAGGCTTG    3180

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GTCTGTGGGA AGAGGAAGAG TCTGTAGAGG CAGTGGTCAA AGAAGGTTCG GTCAGCCTCT    3300

CCTGTCTCTA TAATGTCAAA ACGATGGAGG AGATTTTCCC AATCCACTTG GGCACTTGAT    3360

TTACAGCTAT CAAAATCTTC TTGAGGTAGA TTGATTAGAG CTTGAGAAGG AGAGATGAAA    3420

GAAGTGGCTA GTTGCATCTC GGTTTGACTA CTTGCTAAGT CAATTCGCCA GTCTCCAGCT    3480

TCTTGGCTGA TAGCAAGAAT ATCCGTGTTC ATTTGCAGGG CAGTGAACAT CGTTAGCGAA    3540

TTTTTGTTAG TTTCAGTTTT ACCTTCTTGT CGCAGGGCAA GAGTCCGCTT ATCTACTTGC    3600

TCTACTGTCA GTTCATCTGC TGCGTGAAGA TAGAGGGAGA GGGCTTTGCC TTGCTTTTGA    3660

TTCAAACGAA TAGAAGCACC ATAGCAAGTC GGTGTGAGCT GGGTTTCAAT CTGATAACGC    3720

AGAGAAAAGA GCTTCAAATA GTGAGGCTGG AAGCAAGCTT TATCTATATC ATAAGAAGAC    3780

TGGCGGTGAA AGAGGCTGTC TCCCCCCAGT TGACTGGTGA CAGGTGTCAG AAGGAGCCAA    3840

GAGTAGTCCC CAATCCAAGG ACTGGGCTGG TGAGTTAATC GAATCCCCTG AAAGATAGGC    3900

AGATGTGGAT CAAAAAACCA AGATCCATCC TGGTCACTGG TCTGGGGCAC AAAGTAATTC    3960
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765

ATCCCAAAAG GCACGCCTGT GTATGGCAGG GTATTTCCCC GAGAAAAGGC ATGCTTGTTG   4020

GTAGTTCCAA AACGGGTATC GATGGTATCA AGTAGTGGTT TCATAGTCTT TCCTTTAGCT   4080

GTTTTTCTAC ATTATATCAG TAATAGAGGG CCTTTAG   4117

(2) INFORMATION FOR SEQ ID NO: 101:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2727 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

CTGGTTCAAT TATTATTCAC TCTAAGTAGT CATATGTTCT TTATTTATGT GAGTTTTTAC   60

CTTTTAAAGG ATCTTGTTAG ATGGGAGAAG GTTTTAAAAG TGACAGATGA TAATACAAGA   120

AAAGTTCGTT TATTAGTAGC CTTTTTTAGC ATTGTCATAG GCTACATCCT GAGTTCTTTC   180

TTTATTAGCC TGTATCATTT GTGGCAAGAA GCGCTTAGAG GATTATTATG AAATCAAGAG   240

TAAAGGAAAC GAGTATGGAT AAAAATTGTGG TTCAAGGTGG CGATAATCGT CTGGTAGGAA   300

GCGTGACGAT CGAGGGAGCA AAAAATGCAG TCTTACCCTT GTTGGCAGCG ACTATTCTAG   360

CAAGTGAAGG AAAGACCGTC TTGCAGAATG TTCCGATTTT GTCGGATGTC TTTATTATGA   420

ATCAGGTAGT TGGTGGTTTG AATGCCAAGG TTGACTTTGA TGAGGAAGCT CATCTTGTCA   480

AGGTGGATGC TACTGGCGAC ATCACTGAGG AAGCCCCTTA CAAGTATGTC AGCAAGATGC   540

GCGCCTCCAT CGTTGTATTA GGGCCAATCC TTGCCCGTGT GGGTCATGCC AAGGTATCCA   600

TGCCAGGTGG TTGTACGATT GGTAGCCGTC CTATTGATCT TCATTTGAAA GGTCTGGAAG   660

CTATGGGGGT TAAGATTAGT CAGACAGCTG GTTACATCGA AGCCAAGGCA GAACGCTTGC   720

ATGGTGCTCA TATCTATATG GACTTTCCAA GTGTTGGTGC AACGCAGAAC TTGATGATGG   780

CAGCGACTCT GGCTGATGGG GTGACAGTGA TTGAGAATGC TGCGCGTGAG CCTGAGATTG   840

TTGACTTAGC CATTCTCCTT AATGAAATGG GAGCCAAGGT CAAAGGTGCT GGTACAGAGA   900

CTATAACCAT TACTGGTGTT GAGAAACTTC ATGGTACGAC TCACAATGTA GTCCAAGACC   960

GTATCGAAGC AGGAACCTTT ATGGTAGCTG CTGCCATGAC TGGTGGTGAT GTCTTGATTC   1020

GAGACGCTGT CTGGGAGCAC AACCGTCCCT TGATTGCCAA GTTACTTGAA ATGGGTGTTG   1080

AAGTAATTGA AGAAGACGAA GGAATTCGTG TTCGTTCTCA ACTAGAAAAT CTAAAAGCTG   1140

TTCATGTGAA AACCTTGCCC CACCCAGGAT TTCCAACAGA TATGCAGGCT CAATTTACAG   1200

766

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CCTTGATGAC AGTTGCAAAA GGCGAATCAA CCATGGTGGA GACAGTTTTC GAAAATCGTT   1260

TCCAACACCT AGAAGAGATG CGCCGCATGG GCTTGCATTC TGAGATTATC CGTGATACAG   1320

CTCGTATTGT TGGTGGACAG CCTTTGCAGG GAGCAGAAGT TCTTTCAACT GACCTTCGTG   1380

CCAGTGCGGC CTTGATTTTG ACAGGTTTGG TAGCACAGGG AGAAACTGTG GTCGGTAAAT   1440

TGGTTCACTT GGATAGAGGT TACTACGGTT TCCATGAGAA GTTGGCGCAG CTAGGTGCTA   1500

AGATTCAGCG GATTGAGGCA AGTGATGAAG ATGAATAAGA AATCAAGCTA CGTAGTCAAG   1560

CGTTTACTTT TAGTCATCAT AGTACTGATT TTAGGTACTC TGGCTCTAGG AATCGGTTTA   1620

ATGGTAGGTT ATGGAATCTT GGGCAAGGGT CAAGATCCAT GGGCTATCCT GTCTCCAGCA   1680

AAATGGCAGG AATTGATTCA TAAATTTACA GGAAATTAGG CTGGAGAACC AGCCTTTTTC   1740

TAAAGATAAG GAGAAATATG AACAAAAAAA CAAGACAGAC ACTAATCGGA CTGCTAGTGT   1800

TATTGCTTTT GTCTACAGGG AGCTATTATA TCAAGCAGAT GCCGTCGGCA CCTAATAGTC   1860

CCAAAACCAA TCTTAGTCAG AAAAAACAAG CGTCTGAAGC TCCTAGTCAA GCATTGGCAG   1920

AGAGTGTCTT AACAGACGCA GTCAAGAGTC AAATAAAGGG GAGTCTGGAG TGGAATGGCT   1980

CAGGTGCTTT TATCGTCAAT GGTAATAAAA CAAATCTAGA TGCCAAGGTT TCAAGTAAGC   2040

CCTACGCTGA CAATAAAACA AAGACAGTGG GCAAGGAAAC TGTTCCAACC GTAGCTAATG   2100

CCCTCTTGTC TAAGGCCACT CGTCAGTACA AGAATCGTAA AGAAACTGGG AATGGTTCAA   2160

CTTCTTGGAC TCCTCCAGGT TGGCATCAGG TCAAGAATCT AAAGGGCTCT TATACCCATG   2220

CAGTCGATAG AGGTCATTTG TTAGGCTATG CCTTAATCGG TGGTTTGGAT GGTTTTGATG   2280

CCTCAACAAG CAATCCTAAA AACATTGCTG TTCAGACAGC CTGGGCAAAT CAGGCACAAG   2340

CCGAGTATTC GACTGGTCAA AACTACTATG AAAGCAAGGT GCGTAAAGCC TTGGACCAAA   2400

ACAAGCGTGT CCGTTACCGT GTAACCCTTT ACTACGCTTC AAACGAGGAT TTAGTTCCCT   2460

CAGCTTCACA GATTGAAGCC AAGTCTTCGG ATGGAGAATT GGAATTCAAT GTTCTAGTTC   2520

CCAATGTTCA AAAGGGACTT CAACTGGATT ACCGAACTGG AGAAGTAACT GTAACTCAGT   2580

AAAAGATACG CCTACACTCC TATGTCACTT ATGGATGTAG GAGTTCTTTT TACTAGTTTA   2640

AGCAGGACTA AGACAGGTAC TAAGACAAAA TAGCAACTTC TAAAACTAAC TTCCAGTTTT   2700

GGGAGAGAGA TGGAAGTTAC TTTGAGA                                     2727
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(2) INFORMATION FOR SEQ ID NO: 102:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5717 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

767

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

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TTTTTTGTAG ATTTAAGTGG GGTGCAATTC CTAAAAAATA AAAAACAATT TTTGAAAATT      60

ATGTTAGCAG GAATTGCTTC AAATTCGATT TTATCACTTA CAGGTTTACT TGTTTTATTG     120

TTCACATCGT ATAAATTGCT TGGACTCTTA TTTTTTATCA TTAACTTAGG TATGATTTTT     180

ATTAATTCAA TTCCTTTTTT TCAGTATGAT AGTGGTATTA TTTTAAGATA CTTGAATTCT     240

AACAATAATA ACTTGAATTT TCAATATATA GTTCAACTTT TAATAGCATT TGTTATTATT     300

TATTTTCCTT TGAGTCAACT ATTACAGTTT TTGACACCCA ATATTATTGT TCGTAGTATA     360

GGAGGGGTGG TTGTTTCTAT ACTGCTTTCT ATATTATATA TGATAGGAAG GACGAAATAT     420

GTTCTACGTA AATAGTTATG TTTTTGCTTA TAAAAAAGAA GGTATAATGT ATTTACGTGG     480

TCGGAGTATG CGGGAAATAG CTATAGAACC TCAAATTTCG CAAGAATTTA TCAACGATCT     540

ATTTAATAGT TGTAAGGAAC TATTAGAGAT AGAAGAAGTA TTAGGCAGTA AACTAACATT     600

TGAACTATAA ATGAACAAAT TTTAATTTCG GATGAGATAG ATATTGATAG TAGATATTCT     660

AGAACTAAAG GTTACTATTC GTTATTTTAT AATGAAGAGT ATAATAAAAT ACAGAATAAA     720

ACAGTATTAG TATTAGGAGC AGGAGTCTTA GGATGTTATA TATCTCTAAG TCTAAGTATG     780

TATGGAGTGA GGAAACTTAT TGTCGCTGAT TACGATATAA TAGAACCATC AAATTTAAAT     840

AGGCAAATTC TTTATACAGA GTCGGATGTT GGTAAGGAGA AGATTAATGT TCTTTCTGAA     900

AAAATACACA AGTATAATTC AGATGTTCAG GTAGTACCTA TTTCTATTAA AGTTTCTTCA     960

GTAGAAGAAT TAGAAAAAAT TGTTGCGGAA TATGGGAGTA TAGATTTTAT CGTTAAAGCA    1020

ATTGATACGC CCATTGATAT TATAAAAATT GTCAATCAAT TTGCTGTATC GCATAAGATA    1080

TCCTACATAT CAGGAGGGTT TAATGGATGC TATCTTATTA TTGATAATAT ATATATCCCT    1140

ACCATCGGTT CTTGCTTTGG TTGTCGGAAT ATAAACAAAG ATATAAATAA GTACACTTTA    1200

TCTGATAAGA CAAAGTGGCC GACTACACCA GAGATGCCTG CTATTTTGGG AGGGATAATG    1260

ACTAATTTAA TAATTAAAAT ATTTCTGGGA TGTTATAATG AAATCCTAAT AGATAACGCT    1320

TACGTTTATA ATATGAGAAA TCATGCTCTA AGTCAAGAAA AATATGTTCT GGAAAACGGA    1380

GAATGTCCAA TTTGTAAAAA AATAATAAAG TGAAAGATAA CAATATTAGA GCGAAAACAT    1440

TTATTCGTTC AGTTTGTTTT TGCTTATTAT CAGGAGGAGT AGCTTTTTTA TCTGCTATTG    1500

GGCAGTTCAC TGTTATAGAA ACACAATTAA TAGTATTGTT CTTGGGTATT ATTTTTGCTA    1560

TATATTATGC TTACTACAAT AAAAATATTC AAACATCATT GGAAAATATA GTATGGCTTT    1620
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768

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TTTCATCGTT TGAGATTTTA TTTTTGCTTG TTAATTTTAG AACATTTATT CAGTTACCAG    1680

TGGATATTTT TATTGGTATG ATAATATTTT TAATGCTGTG GATATTTATT ATGTTAGGTA    1740

TAGTGTGTCT TAGTTATTAT ATAACTTTAT TATTTAGCAA GGAGGCTTAG TATGTTTAAA    1800

AAAATAGGTA TAATGAGCAT TTGCATATAT ATAATTATTT TATACTGCTT GAGAATGTAT    1860

CGTATTATCA ATAATATTGA AACAATCTTG CTAACGGTTA TATGCTTAAT GTTATTGTTT    1920

TTTTTAAGAC GTTTATTTGA TAAAGATAAG TAAATAGATG TTAAGTAAAA ATGTAGAATA    1980

TAAAGGAGGT GCAATGAGTA TGATTGAAGT TAGCCATTTA TCAAAAAGTT TTGGTGATAA    2040

AATAGCTTTA AATAATATAA GCTTCACTGT TAAAGAAGGT TAGATTTTTG GATTTTTAGA    2100

ACCATCTGGT TCTGGAAAGA CCACAACGAT TAATATTCTG ACTGGGCAGT TCCTTGCCGA    2160

TAAAGGACAA TCTATTATTT TGGGACAAAA ATCTCAAAAT TTAACAAGCG GTGAATTAAA    2220

GAGAATTGGA TTGGTTAGCG ATACAAGTGG ATTTTATGAG AAAATGTCTC TGTATAACAA    2280

TCTTCTTTTT TATAGTAAAT TTTATAATAT TAGTAAATCA CGTGTTGATA ATTTGTTAAA    2340

GCGAGTAGGA TTATATGATA GTCGCAAGAT GGTAGCAGGA AAATTATCCA CTGGAATGAG    2400

GCAACGAATG CTTTTAGCAC GAGCTCTTAT CAACAACCCC GCTGTACTCT TTCTGGATGA    2460

ACCGACCTCA GGTCTAGATC CCACAACTTC TCGAACAATT CATGAGTTAA TTTTAGAATT    2520

GAAAACAGCA GGGACAACGA TTTTTCTAAC GACTCATGAT ATGAATGAAG CAACTCTTTT    2580

ATGTGATTAT GTTGCCTTAT TAAATAAAGG GAAATTAGTT GAGCAAGGAG CTCCTTCTGA    2640

ACTCATTCAA AGATATAATA AAGATAAAAA GATTAAGGTT ACAGATTATA ATGGGAATCA    2700

GATAACTTTT GATTTTACAT CACTAGAACA GGTATCTCAG ACTGATCTGG AAAATATTTT    2760

TTCAATTCAT TCATGTGAGC CTACTTTAGA AGATATTTTT ATCACATTAA CAGGAGGAAA    2820

GCTAAATGCT TAAACGGTTT CTGGCTTTGG TATGGTTGCG TTGTCAAATC ATCCTTTCCA    2880

ATAAGAGTAT TTTATTGCAA GTTTTAGTGC CTTTTGCTTT CACATATTTT TATAAATATC    2940

TTATGGAAAC ACAGGGGAAG GTCAACGATC AACAGGCATT AGTTCTTTTG ATGATGTGTT    3000

TACCTTTTTC TTTTTCTTTG GCTGTTGGAA GTCCTATAAC TATTATCTTG TCTGAAGAAA    3060

AAGAAAAGTA CAATTTACAA ACTCTTCTGT TGAGTGGTGT TAAAGGCTCC GAATACATTT    3120

TATCAACTAT GTTTCTTCCT TTTTTGCTAA CTTTTGTGAT TATGGGAACT ACTCCTCTTA    3180

TTTTAGGAGT TACAATTGTA CATACTTTTA ATTATATTAC AATCGTTCTT CTAACCTCTT    3240

TATCCATCAT TTTATTCTAT TTATTGATAG GTTTAACCGC GAAGAGCCAA GTAGTAGCTC    3300

AGGTTATCAG TCTTCCTGCT ATGATTTTAG TTGCTTTCTT ACCGATGCTA TCTGGTTTGG    3360

ATAAGACAGT TGCGAAGATA ACAGATTATA GTTTTATGGG ACTATTTACT AAGTTTTTCA    3420
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769

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CAAAATGGGA GGAATTTTCA TGGAATAAAA CTCTAATTCC TAATCTAACA CTACTTATTT      3480

GGATTGTTCT TCTATTAACT TTAATTACGA TAACTATTAG GAAAAAGAAA ATTTCTTAAT      3540

TGAGTTATTT TAATGATTAT AAACACAAGT GGGAAGGAAA AAATGAACTG ATCTTTTTGA      3600

CAGCAATTCT ACAGAATAGT CTTATTGCTA TATTTTGATT TGAGTGTACG AAAAAAGAAA      3660

AATAACAATA GTGCTCATAC TAATTGCAGA AGTTTTGGGT GATAAGATAA CTGATAAATT      3720

GCAATAAAAA ATGCAACATT TTTAAATCTC CTCTATAAGT GCTTCAAAAA GTGCTTCAAA      3780

ACCTGTCTTG TAATCCAAGT ATTTTTGGGG ACGGTGATTA ATAAGCTAGC AAAGCATCAT      3840

TAAGGATTTT TTCGGTAATT GTTGCCAAAT CGGTTTAAGA AAATACTCAC GAAGAAGTCC      3900

ATTCGCATTC TCATTACTTC CCCTTTGCCA AGATGAATAG GCATCCGCAA AATAAAACAG      3960

AATTCCCATT TGTTCAATTA AAGGGTAACA AGCAAACTCT TTTTCTCTGT CCGAAGTGAA      4020

AGTCTTTAAC TATTCTTTTG GAAAGAGTCT TGTGAGGTGT TCAATAGCAG TCAACATGGA      4080

TTTAGCTGTT TTTACTTGAC AAGTGCTAGT AGAAATAATA GAATAGTAAA AAACCTTTAA      4140

AGCAGTCCAG AGAGGCAGCT AAGGTTAGAC GGTGAAAGGG TGGAGACTAC CCATTTTTCG      4200

TGGAACCTTG CTGTTGGCAG GTTCCTTTTT TCGTGGCTTC TGTTGGCCAG ACTCTCTCAC      4260

TAGTAAAGGT AAAAGGAGAA ACCTATGCGA GAACATCGTC CAATCATTGC TCTTGATTTT      4320

CCTAGTTTTG AGGCGGTCAA GGAATTTTTA GCTCTTTTCC CAGCAGAAGA AAGCCTTTAT      4380

CTCAAGGTAG GGATGGAGCT TTATTACGCA GCGGGGCCTG AGATTGTGTC CTACTTAAAA      4440

GGTTTGGGTC ATAGTGTCTT TTTGGATCTC AAACTTCATG ACATTCCTAA TACAGTCAAG      4500

TCAGCCATGA AGATCTTGTC TCAGCTTGGT GTCGATATGA CTAATGTCCA TGCGGCTGGT      4560

GGTGTAGAGA TGATGAAGGC GGCGCGTGAA GGTCTTGGGA GTCAAGCCAA ATTGATCGCT      4620

GTAACTCAGC TCACATCAAC GTCAGAAGCT CAGATGCAGG AGTTTCAAAA TATCCAAACC      4680

AGTCTGCAAG AGTCTGTGAT TCACTATGCC AAGAAGACAG CTGAAGCTGG CTTGGATGGT      4740

GTTGTTTGCT CGGCTCAGGA AGTACAAGTC ATCAAGCAGG CTACCAATCC AGATTTTATC      4800

TGTCTGACAC CAGGGATTCG TCCAGCTGGT GTTGCAGTTG GAGATCAAAA ACGAGTCATG      4860

ACACCTGCTG ATGCCTATCA AATCGGCAGT GACTATATCG TAGTGGGACG TCCCATTACC      4920

CAAGCTGAGG ATCCTGTTGC AGCTTATCAT GCCATCAAGG ATGAATGGAC ACAGGACTGG      4980

AATTAAAGAA CTAGATTAGA AAAATAAAAG GAGAATACCA TGACACTTGC TAAAGATATC      5040

GCTAGCCACC TCTTGAAAAT CCAAGCCGTT TACCTCAAAC CAGAGGAACC CTTCACTTGG      5100

GCATCTGGTA TCAAGTCACC GATTTACACT GATAATCGTG TGACACTAGC CTATCCAGAA      5160
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770

ACTCGTACCC	TAATTGAAAA	TGGTTTTGTG	GAAGCTATCA	AAGAAGCCTT	TCCTGAAGTA	5220
GAAGTGATTG	CAGGAACTGC	AACAGCAGGG	ATTCCACACG	GAGCCATTAT	TGCTGATAAG	5280
ATGGACTTGC	CTTTTGCCTA	CATCCGTAGT	AAACCAAAAG	ACCACGGAGC	TGGTAATCAA	5340
ATCGAAGGTC	GCGTAGCTCA	AGGTCAAAAA	ATGGTAGTGG	TTGAAGACCT	TATTTCAACG	5400
GGTGGTTCAG	TTCTTGAAGC	TGTAGCAGCA	GCCAAGCGAG	AAGGAGCAGA	TGTACTTGGA	5460
GTTGTAGCGA	TTTTCAGCTA	CCAATTGCCA	AAAGCAGATA	AGAACTTTGC	AGATGCTGGT	5520
GTTAAACTTG	TGACGCTTTC	AAACTATAGC	GAGCTTATCC	ATCTAGCCCA	AGAAGAAGGT	5580
TACATCACGC	CAGAGGGCCT	TGATCTTCTA	AAACGCTTTA	AAGAAGACCA	AGAAAATTGG	5640
CAAGAAGGTT	AGGTCAGTAA	GATAAAGAGA	GACGAGGCTA	CCGAGTCTCT	TTTACCATTT	5700
TATTTAAAAT	ATGACAG					5717

(2) INFORMATION FOR SEQ ID NO: 103:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5558 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

CCTGGACTTT	CTAAAATGAA	ATCTTGCGAC	CTGGATCAAG	CCCTTCATGA	GCATTTTTCA	60
GAAGAAGAAT	TAGCTGGTCA	CTTTCATGTC	CTTCTATGGA	CTTTTTTTAC	AATGGCATTG	120
CTATCACACC	CAATACCTAT	CTAAGCGCCT	GGTTCGTAAA	CTTTATTGCA	GCTCTTCCTC	180
TAAATTTCCT	AATTGTTGAA	CCAATTGCCC	GTTTTATACT	AAGTTCTTTT	CAGAAACCAT	240
TTACTGGGGA	AGAAGTTGAA	GATTTTCAAG	ATGATGATGA	AATCCCAACT	ATTATCTAAG	300
CCAGTTCTGT	AAACTACTAA	TATTTGAAAT	CCACTTCCTT	TTAGGGTGCA	ATGGTTATAA	360
ATGAATTTTT	GAGAGGATCA	GAATGAAAAA	ACTAGCAACC	CTTCTTTTAC	TGTCTACTGT	420
AGCCCTAGCT	GGGTGTAGCA	GCGTCCAACG	CAGTCTGCGT	GGTGATGATT	ATGTTGATTC	480
CAGTCTTGCT	GCTGAAGAAA	GTTCCAAAGT	AGCTGCCCAA	TCTGCCAAGG	AGTTAAACGA	540
TGCTTTAACA	AACGAAAACG	CCAATTTCCC	ACAACTATCT	AAGGAAGTTG	CTGAAGATGA	600
AGCCGAAGTG	ATTTTCCACA	CAAGCCAAGG	TGATATTCGC	ATTAAACTCT	TCCCTAAACT	660
CGCTCCTCTA	GCGGTTGAAA	ATTTCCTCAC	TCACGCCAAA	GAAGGCTACT	ATAACGGTAT	720
TACCTTCCAC	CGTGTCATCG	ATGGCTTTAT	GGTCCAAACT	GGAGATCCAA	AAGGGGACGG	780
TACAGGTGGT	CAGTCCATCT	GGCATGACAA	GGATAAGACT	AAAGACAAAG	GAACTGGTTT	840

771

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CAAGAACGAG ATTACTCCTT ATTTGTATAA CATCCGTGGT GCTCTTGCTA TGGCTAATAC      900

TGGTCAACCA AACACCAATG GCAGCCAGTT CTTCATCAAC CAAAACTCTA CAGATACCTC      960

TTCTAAACTC CCTACAAGCA AGTATCCACA GAAAATTATT GAAGCCTACA AAGAAGGTGG      1020

AAACCCTAGT CTAGATGGCA AACACCCAGT CTTTGGTCAA GTGATTGACG GTATGGATGT      1080

TGTGGATAAG ATTGCTAAGG CCGAAAAAGA TGAAAAAGAC AAGCCAACTA CTGCTATCAC      1140

AATCGACAGC ATCGAAGTGG TGAAAGACTA CGATTTTAAA TCTTAAAAAC CAAAAAAATA      1200

CAGTATCCAC ATTCGGTACT GTATTTCTTT TACTCTCATT CTTAAGTTAA ATTATTAAAA      1260

TCCCATATTT GGTCTATCCA GCCTTCATAA AAGTCTGGCT CGTGGCAGAC CATAAGGATA      1320

GATCCCCTAT ATTCTTTGAG AGCGCGTTTG AGCTCATCCT TTGCATCCAC ATCCAAATGG      1380

TTGGTCGGCT CGTCCAGCAC TAAAACGTTG TTTTCACGAT TCATCAAGAG ACAGAAACGA      1440

ACCTTGGCTT GCTCTCCCCC TGATAATACT TGAATCTGGC TTTCAATATG TTTGGTTGTC      1500

AAACCACAAC GGGCAAGGGC TGCACGGACT TCTGCTTGAT TAAGGGCAGG AAAGGCATTC      1560

CAGACAGCTT CAAGAGGAGT TTGGCGATTA CCGCCTTCTA CTTCCTGCTC AAAATAACCA      1620

AGTTCTAAAT AATCTCCACG CTCCACTTCC CCAGCGATTG GCGAGATAAT GCCCAAGAGA      1680

CTCTTCAAGA GAGTTGTTTT TCCAATACCA TTAGCACCAA TAATCGCAAC CTTTTGATTG      1740

CGTTCGAAGG TAAGATTTAA AGGCTTAGTA AGAGGACGGT CGTAACCAAT TTGCAAGTTC      1800

TTGGCTTGGA AGATAAAGCG CCCTGGTGTA CGAGCTGGTT TGAAATCAAA GGATGGTTTT      1860

GGTTTCTCAC TTTGGAGTTC GATAATATCC ATCTTATCCA ATTTCTTTTG ACGAGACATA      1920

GCCATATTAC GAGTTGCAAC ACGGGCTTTA TTACGAGCCA CAAAGTCCTT GAGGTCTGCA      1980

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TCTTGGAACT GGTAGTAGTC ACCAGAGTAA CGCGTCAGCT GTTGATTTTC CACATGATAG      2100

ACAATATTAA TAACGTCATT GAGGAATGGA ATATCGTGCG AAATGAGAAC AAAGGCATTC      2160

TCATAGTTTT GGAGATAGCG CTTGAGCCAA TCAATATGCT CAGCATCCAA GTAGTTGGTC      2220

GGCTCGTCCA ACAGCAAGAT ATCAGGCTTT TCAAGGAGAA GTTTTGCCAA AAGCACCTTG      2280

GTTCTTTGCC CACCTGACAA AGAAGTTACA TCCGTATCCA TGCCAAAGTC CATAACACCA      2340

AGAGCACGCG CTACTTCGTC AATCTTAGCA TCCAAGGTAT AGAAATCACG ACTCTCCAGA      2400

CGGTCTTGAA GTTCTCCTAC TTCTTCCATG AGAGCATCAA CATCCGCGCC GTCTTCAGCC      2460

ATTTTCATAT AGAGGTCATT GATACGAGCT TCAGCTTTGA AAAGCTCATC AAAAGCCGTA      2520

CGGAGAACAT CACGCACCGA CTGTCTTTCA GCAAGGACAG AGTGCTGATC CAAGTAACCA      2580
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772

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GCCGTCACAT ATTTGGACCA CTCAACCTTT CCTTCATCTG GCAGCATTTT ACCAGTCACG    2640

ATACTCATAA AGGTTGATTT TCCTTCACCA TTGGCACCGA CCAGGCCGAT ATGTTCTCCC    2700

TTGAGGAGAC GGAAGGACAC ATCTTCAAAA ATTGCACGGT CACCAAAACC GTGACTCAGA    2760

TTTTTAACTT CTAAAATACT CATTTTAATT CCTTACCTTG TTTTTATGTA ATCGTTTATA    2820

AAGGAGCCAA GCCAGATAGC CACCCAAAGT GTTGGTCCAC AAATCATCAA TCTCAAAGAC    2880

GCGATTGAAA TCAAAGAAAA AGTCCAAGAT TAATTGCGTA CACTCGATTC CAAGACTCAC    2940

AAGAAAACTA AAAAGAAGGA CCTTTTTTGT TTTCCGCAAA TTTGGAAATA GATAAAGGAG    3000

TTGGAAAATC AGAGGAAAAA ACAAGAAGAC ATTGAGGATA TTTTGTAAAA AAATCCAACA    3060

TAATTGTCCA ATGTCACTCA CTTCGCCCAG TTTCAGAGA GAATTGAAAG GAGTCAAAAG     3120

AAAAACCAGG CGTCCAAGAT GCTGAATACC TGGAGTTCCC ACTCCCACGG TAGATTGTTC    3180

TTGAGGAGTA AAGCAAAAAC AGACAATGCA AATGCTATAG AAAATGACTC CCCAGACCAA    3240

AATATGATTA TAAGTCTTCT TCATCATTAA GGATTTACCG CTGCGACTGC CTTCTGGCGG    3300

TCACGTTTCA TTGTGTTAGA GCGCAATTGT CCACAAGCTG CGTCAATATC TGTACCATGC    3360

TCTTGACGAA CCACACAGTT GACCCCTTTT TTCTTAAGCG TATCATAGAA AGCCAACACG    3420

CACTCTTTGG GACTACGGCT ATATTGGTCA TGCTCACTAA CTGGGTTATA AGGAATCAAG    3480

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ACACCGTCGT TGACTTCATT AAGCATGATA TATTCAAAGG TTACACGACG GTTTGTTGTC    3600

TCAATGTAGT ATTCAATAGC AGCAAAGAGT TTTTCAATCG GAAAGGCACG GTTAATCTTC    3660

ATGATACTTG AACGAAGTTC ATTGTTAGGT GCGTGAAGAG ACACGGCAAG ATTGACCTGA    3720

ACCCCTTCAT CAGCAAAGTC ACGAATTTTA TGAGCCAAAC CTGAGGTTGA AACCGTGATG    3780

TGACGAGCAC CGATAGCCAT TCCTTTATCA TCATTGATAG TACGAAAGAA ATTCAAGACA    3840

TTGTTGTAAT TATCAAAGGG CTCACCGATT CCCATGACAA CGATATGGCT GATGCGTTCA    3900

TCCTGACCAC GCTCATCAAA GTATTTCTGA ACCAGCATGA TTTGCGCTAC GATTTCACCG    3960

TTATTGAGGT CACGTTGCTT CTTAATCAAA CCAGAGGCAC AGAAGGTACA ACCGATATTA    4020

CAGCCGACCT GAGTGGTCAC ACAGACAGAT AAACCATAGT GTTGACGCAT GAGTACAGTC    4080

TCAATTAACA TACCGTCGGG CAATTCAAAG AGATATTTGA CTGTACCATC AGCAGACTCT    4140

TGCACAATAC GTTGTTTCAA GGGATTGACC ACAAACTGGT CATTGAGCTT AGCAATCAAA    4200

TCCTTGGAAA GGTTGGTCAT TTCTTCAAAT GACTGCACAC GTTTACGGTA GAGCCATTCC    4260

CAGATTTGAT CTGCACGGAA TTTCTTTTCT CCCTGCTCCA ATACCCATTC CTGCATGGTT    4320

TGATGTACCA AACTATGAAT TGAGGGTTTC ATTTCTTCTC CTTATTCTCT ACTCACTTCT    4380
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773

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GACGAATGAC AAAATGACGT TGTCCCTTGT CGTCTTTCTG ACGACGTCTA TTTTTCTTAT      4440

CTGCATTCGA CTTTCGTTTA GTTTGAGTCG GTTTCTTTCC TTTTCTAGAA GGTGTTTCTT      4500

CTTCCGTCTT ACGCATTTTC TTGTCAAATG ATGCTCGCTT AGGGGCTTCA TTTTCTAAGA      4560

CAAAATAGGC ACAACCATAA CTACAATACT CTAAAAGGTA GTCTTGTAAA CGACTGATTT      4620

TTTCAAGTTT TTCTTCTGTT CGGTCATCCT TGTAAAAACC TCGTAGGCGA AGCTGTTCGT      4680

TGCTCCAGTC CCCCACGATA TAATCAAACT TGGTTAATAC TTCTGAAAAA CGCTGATTAA      4740

AAGTCGTCAC ATCAAAGGCA TCCTTGATAT TTTCAACCAA GGAAAAAGCT ATCCCTTCCG      4800

TTTCGACCTT GTCCCCGTGT AAATGGAACT CCGGACCAGG AAACTTGTTA TAGTTGTATA      4860

ATTCAGGTGC AATTTCTTTT CGCATAGATA TCCTTTTTTC ACGATTACTT AATACTTTAT      4920

TCTACCATAA TTTCTAGCAG TTAGCACGTT TCTCATAAAA ATGAAAAAAG TCTGACGATT      4980

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TTATTTAGCA GCTGCGTACA ATTCATCTAC TTTATTCCAG TTGATTACTG AAAAGAAAGC      5100

TTTGATGTAG TCAGGACGCA CGTTGCGGTA TTTCACGTAG TAAGCATGTT CCCAAACGTC      5160

CAAGCCCAAG ATTGGTTTTT TACCTTCTGA GATTGGTGTG TCTTGGTTTG CTGTTGAAGT      5220

CACTTCAAGT TTCCCTTCTT TGTTGACAAC CAACCATGCC CAACCTGAAC CAAAACGAGT      5280

TGTTGCTGCT GCAGTGAAGG CTGCTTGGAA TTCTTCAAAT GAACCAAATG TTGCATCGAT      5340

TGCTGCTGCC AGTTCTGCTG AAGGAGCTGT TTTCTCGGGA GTCATCAATT CCCAGAAAAG      5400

AGCGTGGTTC AAGTGTCCGC CACCATTGTT GATAAGTGCT TGACGGATAT CAGCTGGGAT      5460

AGATTCTACA TCAGCAAGCA AGGCTTCAAG GTCTTCACCG ATTTCAGGGT GTTTTTCTAA      5520

AGCTGCATTG GCATTGTTGA CATAAGTTTG ATGGTGTT                             5558
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(2) INFORMATION FOR SEQ ID NO: 104:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6735 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

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GGAATTGTAA ATATCATATT GTTTTTGCAC CCAAATATCG TCGTCAAATC ATTTATGGCA        60

GATACAAAGC TAGTATCGGA AGAATCATAC GTGACTTATG TGAGCGTAAG GGTGTAATAA       120

TCCATGAAGC GAATGCTTGT TCAGACCATA TTCACATGCT TATCAGTATT CCTCCGAAAC       180
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774

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TTAGTGTTTC GTCCTTTATG GGCTATTTAA AGGGCAAGAG CAGTTTGATG ATTTTTGATA    240

AGCATGCGAA TTTAAAATAC AAATATGGCA ATCGCAAGTT TTGGTGTAGA GGCTATTATG    300

TAGATACGGT AGGCCGTAAT CAGAAAGTGA TAGCTGAATA TATTCAGAAT CAATTACAAG    360

AAGACAGAGT AGCAGACCAG CTCACGTTAT TCGAGTCAGT AGATCCGTTT ACTGGCGAAA    420

TAAATAAGAG GAAGTAACTA AGGTGCTTTA GCACCTGCTC GGGAAAGTGG TGCGCGAGGA    480

AGCTATTTCG GTGGGCCTTT GGCCCTGGCC GGTAGAAGCG GCTTATAGCC GCAGAACAAA    540

CCACCAGTTC ACACTGGTGG TTTTGATTTA AAAAACTTGA TACATAAAAA TAAAAGTCTA    600

TATAAAGGAT GGTAAAATTC CTGTTGTCCG ATTTGGACAA TATCCTAAAT AGTTACAATA    660

TATGGTCTAT ACTTTTTCTT AGGAGAAAGC TAGATGTACA GACGTTTGAG AGATTTGAGG    720

GAGGATCATG ATCTGCCCCA AAAGCAAATA GCTACAATAC TTTCGTTTAC AAATTCAGCT    780

TATGCCAAAA TTGAACGGGG TGAGCATGCG TTGACGGCTG ATGTATTGGT TAAACTCTCA    840

GATTTCTATG ACGTCAGTAC AGACTATTTA TTGGGATTAA CTGATTTTCC TGATAAAATT    900

CGCTTTAGAA AATAATCTCC TCAATTTCAT AGAGTTTGAA AATGAGTGAG ATTTTTTATT    960

TGCCCTTTGA CAACTGAATA GCCTAAAATG GTACTTTCCT CATTTGTGGA GCAAATTTGA    1020

ATGGCTCGCC ATGATAAGAG CGATTTTAAA ATCATCAATA AAATAGAGCG ATACTTTATA    1080

TGCCATGATA CAAATGATAT ACAATGATAC TTCTGACCGT TCAGCCTGCC AACGTAAAAG    1140

AGCAGCAAGT GAAATTCTTA TGATGACTTC ATCAGTCATG CCACGTTGAA TGTGTGAGTT    1200

TGTTAGATAA ACGCAATTAA TCCTCAAAAG GTTCCCCGAA CCTTTTGAGT TCTACAGACG    1260

CATCACGTGG AGTGTGTAAG CTTGTTGCTA AAAGCGTAAA AACCTTGGAA CGAAAGGAAT    1320

AATAGACTTT CTGCGAAACA AAAATATAAT ACAATAAAAC TATGAATGAT GAAGCAAGTA    1380

AACAATTGAG CGATAGCCGT TTCAAGATCC TTGTAGGTGT TCAGCGCACG ACTTTTGAAG    1440

AGATGTTAGC TGTGTTAAAA ACAGCTTATC AACGTAAACG CGCAAAAGGT GGACGAAAAA    1500

GCAAATTAAG CCTAGACGAT CTCCTTATGG TAACTATTCA ATACATGCGA GAATAGAGCA    1560

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GGTATAATAG CAATCAAAAC TAGAAAATAA AACGGAATTT GGAACAGATT TGTCTGTATC    1800

CTAGTAGAGT GGTGATACTA TGAAGATTAG TAAGAGGCAC TTATTAAATT ATTCCATCTT    1860

GATTCCCTAC TTGCTTTTAT CTATTTTGGG CTTGATTGTC GTCTATTCGA CCACCAGTGC    1920

TATTTTAATT GAAGAAGGCA AGAGCGCCTT GCAGTTGGTT CGAAACCAAG GAATCTTTTG    1980
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775

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GATTGTTAGT TTGATACTGA TTGCCTTAAT TTATAAATTG AGACTAGATT TTTTGAGAAA        2040

TGAGCGACTA ATCATTTTAG TTATATTAAT AGAAATGCTT TTATTGTTCT TGGCTCGTTT        2100

TATTGGTATT TCCGTAAACG GGGCATACGG TTGGATTTCG GTTGCAGGAA TAACTATTCA        2160

GCCAGCTGAG TACTTAAAAA TCATTATTAT TTGGTATTTA GCTCACCGAT TCTCCAAACA        2220

GCAAGAAGAA ATAGCTACTT ATGATTTTCA AGTTTTGACT CAAAATCAAT GGCTTCCCCG        2280

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CTTGATTCCA TCTACAGGAG TGACTTTCCC CTTCTTATCC CAGGGTGGAA ATAGTCTTCT        2940

AGTCTTATCA GTGGCAGTAG CCTTTGTCTT AAATATTGAT GCCAGTGAAA AACGCGCTAA        3000

ATTGTACCGA GAATTGGAAA ATCAACCAAT GAACCTTCTG TTGAAGTAGG ATAAAGAAAG        3060

GATAGTTTAT GTCTCTTCAA AAATTAGAAA ATTATAGTAA TAAAAGTGTT GTGCAAGAAG        3120

AAGTCTTGAT TCTAACAGAA TTACTGGAAG ATATTACTAA AAATATGCTT GCCCCAGAGA        3180

CCTTTGAAAA AATAATACAG TTGAAAGAAT TATCAACGCA GGAAGATTAT CAAGGTCTAA        3240

ACCGTCTAGT GACTAGCTTA TCAAATGATG AAATGGTCTA TATTTCACGC TATTTCTCTA        3300

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TGCGTCGTTA CATCGAAATT ATCATGCAGA CAGACATGAT TCGTGAGAAA AAATTAAAAG        3660

TGACTAACGA AATCACGAAT GCTATGGAAT ATTATAACAG CTCCTTTTTG AAAGCTGTAC        3720
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776

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CTCATTTGAC GACGGAGTAT AAGCGCTTAG CGCAAGCGCA TGGTCTGAAT TTAAAACAGG        3780

CTAAACCAAT CACCATGGGT ATGTGGATAG GTGGTGACCG TGATGGAAAT CCATTTGTTA        3840

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GTCAGACCAT CATTTCACAT GCAACCAGCC TTTCTGATAT GCTAGAATTA GCTATTCTGT        4560

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CAGCCGCTCG TAAGACTATT ACTGAAATCG GTGGTTTGCG TGCCATCCCT TGGGTATTCT        5280

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CTTTCTTCCA ATCGCTTCTT TCAAATGTTG ATATGGTTTT GTCAAAATCA AATATGAATA        5460

TTGCTTTTGA ATATGCTAAA CTTTGTGAAG ACGAGCAAGT TAAGGCCATC TATGAGACTA        5520
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777

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TTTTAAATGA ATGGCAAGTT ACTAAGAACG TTATCTTGGC TATTGAAGGA CATGACGAAC     5580

TCTTAGCTGA CAATCCATAT CTAAAAGCTA GTCTGGATTA CCGTATGCCT TACTTTAATA     5640

TTCTCAACTA TATTCAGTTG GAGTTGATTA AACGCCAACG TCGTGGAGAA TTGTCCAGTG     5700

ATCAAGAACG ATTGATTCAT ATCACCATCA ACGGAATTGC GACAGGATTG CGTAATTCAG     5760

GTTGATAATT TTCAAGAGTG AATGCTAAAA GTGAATATCA AAAAAATTCT AATAGACTAT     5820

TGACAAGTAG TTTAAAAATG ATATAATTTA ACCATTCAGA AAAGTAATCA TACAAACTTT     5880

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TGCGAGACTG AGCGATAGGG AAATTCCCTA TAATTGAGGT GGTACCGCGC ATCGACGTCC     6060

TCACACAAGT TTTTTGTGTG AGGATTTTTT TGATGGAGGT TAGTATGGAA AGAAAACGAT     6120

GGCGTCGCTT GTTTAGATAA GTGAAATATG TTAAAGGAAA TAAAAAGGAG AAACAGAATG     6180

AAAAATAAAC GTTTAATTGG AATTATTGCT GCATTAGCAG TCTTAGTAGC AGGAAGCTTG     6240

ATTTATTCTT CAATGAATAA ATCAGAAGCT CAGAATAATA AGGATGAGAA GAAAATAACC     6300

AAGATTGGTG TGCTTCAATT TGTGAGCCAT CCATCCCTTG ATTTGATTTA TAAAGGGATC     6360

CAAGATGGAC TTGCAGAAGA AGGATATAAA GATGATCAAG TTAAAATTGA TTTTATGAAC     6420

TCAGAAGGTG ACCAAAGTAA GGTTGCGACA ATGAGTAAAC AATTGGTTGC AAATGGGAAT     6480

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CTACCGGTTA TCATGGCCGC TATTACAGAC CCAATTGGTG CTAACTTGGT TAAAGATTTG     6600

AAAAAACCAG GTGGCAACGT TACAGGGGTA TCTGACCACA ATCCAGCTCA ACAACAAGTT     6660

GAACTCATCA AGGCTCTGAC ACCGAATGTG AAAACAATCG GAGCTCTTTA CTCAAGTAGC     6720

GAAGACAATT CAAAA                                                      6735
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(2) INFORMATION FOR SEQ ID NO: 105:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 6516 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

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CTAGAGGATC CCAGCAGGTA AATTGGCTTC AGCTGGCAAA AAAGTTGCCC TCGTTGAACG      60

CAGCAAGGCT ATGTACGGTG GAACTTGTAT CAACATTGGT TGTATCCCAA CTAAAACCTT     120
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778

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GCTAGTTGCT GCTGAAAAGG ACTTGTCTTT TGAAGAAGTC ATTGCTACTA AAAACACGAT    180

CACTGGTCGC CTCAACGGTA AAAACTATGC GACTGTTGCT GGTACAGGCG TAGATATCTT    240

TGATGCGGAA GCTCACTTCC TTTCAAATAA AGTCATCGAA ATCCAAGCTG GTGATGAAAA    300

GAAAGAACTG ACTGCTGAAA CAATCGTCAT CAACACTGGT GCTGTTTCAA ACGTCTTGCC    360

AATCCCTGGA CTTGCTACAA GCAAAAACAT CTTTGACTCA ACAGGTATCC AAAGCTTGGA    420

CAAATTACCT GAAAAACTTG GAATCCTTGG TGGCGGAAAT ATCGGTCTTG AATTTGCCGG    480

CCTTTACAAC AAACTTGGAA GCAAGGTCAC AGTCCTAGAT GCCTTGGATA CATTCCTACC    540

TCGTGCAGAA CCTTCCATCG CAGCTCTTGC TAAACAATAC ATGGAAGAAG ATGGCATTGA    600

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TGGCCTTCAA TTTACTTACA TTTCACTTGA TGACTTCCGT GTTGTTTACA GCTACCTTGC    900

TGGAGATGGC AGCTATACAC TTGAAGACCG TCTCAATGTG CCAAATACTA TGTTCATCAC    960

ACCTGCACTT TCACAAGTTG GTTTGACTGA AAGCCAAGCA GCTGATTTGA AACTTCCATA   1020

CGCTGTTAAG GAAATCCCCG TTGCAGCAAT GCCTCGTGGT CACGTAAATG GAGACCTTCG   1080

CGGTGCCTTC AAAGCTGTTG TCAATACTGA AACAAAAGAA ATTCTTGGAG CAAGCATCTT   1140

CTCAGAAGGT TCTCAAGAAA TCATCAACAT CATCACTGTT GCTATGGACA CAAGATTCC   1200

TTACACTTAC TTCACAAAAC AAATCTTCAC TCACCCAACC TTGGCTGAGA ACTTGAATGA   1260

CTTGTTTGCG ATTTAAGTTG AGATTTAATC GTATCGAACA GCCCTCTTTG GGCTGTTTTT   1320

ACTTCTGCGG AATCTCAAAT CTGTCTTTCT CCTCTTTTAT GATATAATAG AAACATGAAC   1380

TTAAAAACTA CTTTGGGCCT TCTTGCTGGG CGTTCTTCCC ACTTCGTTTT AAGCCGTCTT   1440

GGACGTGGAA GTACGCTCCC AGGGAAAGTC GCCCTTCAAT TTGATAAAGA TATTTTACAA   1500

AACCTAGCTA AGAACTACGA GATTGTCGTT GTCACTGGAA CAAATGGAAA AACCCTGACA   1560

ACTGCCCTCA CTGTCGGCAT TTTAAAAGAG GTTTATGGTC AAGTTCTAAC CAACCCAAGC   1620

GGTGCCAACA TGATTACAGG GATTGCAACA ACCTTCCTAA CAGCCAAATC TTCTAAAACT   1680

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ATCCAGCCTA GTCTTTTTGT CATTACTAAT ATCTTCCGTG ACCAGATGGA CCGTTTCGGT   1800

GAAATCTATA CTACCTATAA CATGATATTG GATGCCATTC GGAAAGTTCC AACTGCTACT   1860

GTTCTCCTTA ACGGAGACAG TCCACTTTTC TACAAGCCAA CTATTCCAAA CCCTATAGAG   1920
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779

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TATTTTGGTT TTGACTTGGA AAAGGGACCA GCCCAACTGG CTCACTACAA TACCGAAGGG    1980

ATTCTCTGTC CTGACTGCCA AGGCATCCTC AAATATGAGC ATAATACCTA TGCAAACTTG    2040

GGTGCCTATA TCTGTGAAGG TTGTGGATGT AAACGTCCTG ATCTCGACTA TCGTTTGACA    2100

AAACTGGTTG AGTTGACCAA CAATCGCTCT CGCTTTGTCA TAGACGGCCA AGAATACGGT    2160

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CCAGTCGGTG CAACCCAAGC TATCGAAATG ATCAAACTAG CACCTTATCC ATTTAGCCTA    2400

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AGTTTTTTGT CTTTTCTTTT ACCCTTCTCC CTTGCATTTT CTCTCATTTT TTGCCAAAAT    3600

AGAGGGGTAG AAAGAAGGTA GCATATGTCT AAATTACAAC AAATCCTAAC ATATCTTGAA    3660
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                                      780
TCAGAAAAAC TAGACGTCGC TGTCGTATCT GACCCCGTCA CAATCAATTA CCTCACTGGT    3720

TTTTACAGTG ATCCCCATGA ACGCCAAATG TTCCTCTTTG TCCTAGCAGA TCAGGAACCT    3780

CTCCTCTTTG TCCCAGCTCT TGAAGTAGAA CGTGCAAGTA GCACCGTTTC CTTCCCAGTA    3840

GTGGGCTATG TCGATTCTGA AAATCCATGG CAAAAAATCA AACATGCTCT TCCACAACTT    3900

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TCTAACCCTA AGTGTCTGGA ATGATAACGA GGGTGCTCTC CGCTTTTATC AAAGACAAGG    4860

GATGAAACCC CAAGAAACAA CAATGGAAAT GATAATTGAT TAAGAAGTCA TCTATCAAAA    4920

GATGTTAGAA AAAGTTCAAT TTCACTAGAA AATGAGGAAA ATCTCCCCAC AATAAAACGC    4980

ATAGTATCAG GTATTGTGTA CTGACCCCAA ACAGTTAGAC AATTAATTTA TCCGAAGGAT    5040

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TAGTAATCAA TATAGTCTAT AATGACTTGT TCCAATTGGT TAAGTGATTT AAATGTTTTC    5160

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TGATAAGAAT CGTGTTGGTA TTGCCAGCCT TGGTCACTAT GGAGAATCGT ATTCTCGTAG    5340

TGCTTCTCTT TGAATGCCTG TTCCAACATT GTTTGTACTT ATTCTAAATT AGGCGAACAA    5400

GAAAGATTAA AAGCAATAAT TTCGCTGTTA AAGCCATCTA AAACTGGTGA TAAGTAAAGC    5460
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781

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TTTTGAGTAC TTGCTGGAAT GGCAAATTCA GTCACATCTG TGTAGCACTT TTCCATTGTT        5520

TTAGAGCCTT CAAATTGGGC TTGAATGAGA TTCTCTGCCT TCTTACCAAC GTCTCCTTTA        5580

TGAGAAGAAT ATTTTCGTTT CTTTCGCATT TTAGCTTGTA AATTGAGTAC TTTCATCAAG        5640

CCTTGAACTC TTTTATGATT TACCAGATAA CCACGATTTC TTAGTTCTAA ATGAACCCGG        5700

CGATAAGCAT AATTTCCCTT GTGTTCGATA AAGATGGATT GAATTTCAGT TTTAAGCTCT        5760

TGGTCTTTAT CTGTTTTGTC TAGCTGTTTC AAGTGATAGT AGTAGGTCCA ACGAGCTAGT        5820

TTAATGGCTT CTAGAAGAAG ATCTAACGAA AACTCAGTCA TTAATTCTTG AACAATTTCT        5880

GTCTTTCTTC TTTCTCTTTT TCCTCCTTCA ATCGGAGTTC TCTTAACTTT TTTAGGATGG        5940

CATTCTCCGC TCTCAGGTAC TCTCCCTCTT GTTTTCTCAA CAATAGTATA CCCGTTTTTC        6000

CTGTATTGTG CTAGCCAGTT AAGAAGTATC GTACGACTTG GGAGACCGTA TTCAAGAGAA        6060

ACTCTATCTT TAGTCCAGCC TTCATGTCAG ACTTTATTAA CCCCAATTAT TCACCCCAAA        6120

TCTAAAAACC ATCCAGAATC CTTGCCTTAG CTTAGATCCT GGATGGTTTC TTTTTTCACC        6180

CAATGGGTGT TTTTTACTAG ACAAAAAAGA GTTTCCCCTT TATGGTATAA GTGTAGAAAA        6240

AAACACAAAA AGAAAGGAAA CTCACATGAA CAGTTTACCA AATCATCACT TCCAAAACAA        6300

GTCTTTTTAC CAACTATCTT TCGATGGAGG TCATTTAACC CAGTATGGTG GTCTTATCTT        6360

TTTTCAGGAA CTTTTTTCCC AGTTGAAACT AAAAGAGCGG ATTTCTAAGT ATTTAGTAAC        6420

GAATGAmCAA CGCCGCTACT GTCGTTATTC GGATTCAGAT ATCCwTGTCC AGTTCCTCTT        6480

TCAACTGTTA ACAGGTTATG GAACGGAATA TGCTTG                                   6516
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(2) INFORMATION FOR SEQ ID NO: 106:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 14654 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

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TTTTCAACCC ATATCGTGGC TCCTGAATAC TACTTACTGA CAACTATGCT ATCAGAGACT          60

TCTCTACTTG TTTTCTATAT CATTTTCATC CATAGAAAAC AACTCATCCA CTTGGGACAT         120

ATCTTTAGCT ATACTGTTCG ATACTCTCTC TTTTCACTTT CCTTTGTAGC AATTTATTTC         180

CTGATTAATT TCGTGTATCC TGTAGATATG GTCATTAATT TGCCATTTTT GATTAATACT         240

GGTTTGATTG TCTTGCTATC AGCTATCTCT TATATTAGTC TACTTGTCTT CACAAAAGAT         300
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782

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AGCATTTTCT ATGAATTTTT AAACCATGTC CTAGCCTTAA AAAATAAATT TAAAAAATCA      360

TAGGAGTTTA AAATGAAACA ACTAACCGTT GAAGATGCCA AACAAATTGA ATTAGAAATT      420

TTGGATTATA TTGATACTCT CTGTAAAAAG CACAATATCA ACTATATTAT TAACTACGGT      480

ACTCTGATTG GGGCGGTTCG ACATGAGGGC TTTATCCCTT GGGACGACGA TATTGATCTG      540

TCCATGCCTA GAGAAGACTA CCAACGATTT ATTAACATTT TTCAAAAGGA AAAAAGCAAG      600

TATAAGCTCC TATCCTTAGA AACTGATAAG AACTACTTTA ACAACTTTAT CAAGATAACC      660

GACAGTACGA CTAAAATTAT TGATACTCGA AATACAAAAA CCTATGAGTC TGGTATCTTT      720

ATCGATATTT TCCCTATAGA TCGCTTTGAT GATCCTAAGG TCATTGATAC TTGTTATAAA      780

CTGGAAAGCT TCAAACTGCT GTCTTTCAGT AAACATAAAA ATATTGTCTA TAAGGATAGC      840

CTTTTAAAAG ATTGGATACG AACAGCCTTC TGGTTACTCC TTCGACCGGT TTCTCCTCGT      900

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AAAACAATCG ATTTACCCTT TGAGAATTTA AGCCTTCCTG CACCTGAAAA ATTTGATACT     1080

ATTTTGACAC AATTTTATGG AGATTATATG ACCCTACCAC CAGAAGAAAA ACGCTTCTAC     1140

AGTCATGAAT TTCACGCTTA TAAATTGGAG GATTAGGATG CAATATTTAG AAAAAAAAGA     1200

AATTAAAGAA ATTCAACTAG CCCTGCTGGA CTATATTGAT GAGACTTGTA AGAAACATGA     1260

TATTCCTTAT TTTCTCAGTT ATGGAACCAT GCTTGGAGCC ATCCGCCACA AAGGTATGAT     1320

TCCTTGGGAT GATGATATTG ATATTTCCCT TTATCGTGAG GATTATGAGC GTTTACTGAA     1380

GATTATTGAA GAAGAAAATC ACCCTCGCTA CAAGGTTCTT TCCTACGATA CATCTTCTTG     1440

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GTACAAGCGT CATGATACCA GCCTTTTCAT CGATGTCTTC CCAATTGATC GATTTACAGA     1560

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TATGTTGCCT GTTCCCAAAA AATATGACCA ATTTTTAACC CAGATGTATG GCGATTATAT     1920

GACACCACCA TCAAAAGAAA TGCAAGAGTG GTATAGTCAT AGCATTAAAG CTTATCGCAA     1980

AAACTGATTG AGGGGGATTA TACAAACTAC TAAGATAGAG GTTATTCAAA AACATAATTT     2040

TAGTAGAAAA TGAAATACAT ATTCCCACAA TAAAACGCAT CATATCAAGG TTTTTGAAAA     2100
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783

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ACCTTGATAT GATGCGTTTT ATAATTTTAA AGACTTTTTT CTATAGTAGA TTGAAATAAG    2160

ATGCGAACAA ATCAATTAGA AAATTCAAAT TAATTTATAG AAATATTTTA GTATTCCTGT    2220

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TCCTTATCGT CATCACCAAT CTTACCAACA GGTTGGGCTT GCAAGCCATG ACTAGCAAAG    2520

AAGGCTGCTG TCCCTTCTGT CGCAAGGATT CCATAACCAA TGTTTTGGAA ACGACGAGCC    2580

AAGTTCAAGG CTTCTTCTTT GGCATCATCA GCGATGGTAA AGACGACATT ACCAAAAGTT    2640

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GATTCTTTAT CAGATCTGAT AGATTCATTT TCCCAACCAT AGGTTGAATA GAAATATGGC    3840
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784

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GTTTCGGAGT CGAACTCTGC CGCACAAGTG TCTACCATCT TATAAACTGG AACAATCTTG   3900

TTTTCCAAGC GAAGTTGGCG AACTTTATCA TCAGTCGTTC CCCAGAGTTC AGCAATCTTA   3960

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CCCAATTCTT GCTCAATTTC AAAGATATGC AAGAGTTTAT CAAGATAGAA GATATCAATT   4080

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CTATTCGTCG CCTCTCAGGG CGACATTAAA TAAGATACAA AGGACGAATA GAAAGCGATT   5640
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785

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GAATTTTAGG AAATCAAGGA AGGATTGACA ATCCAAGTTG GTTTCTCTAC ATTCTGAGCT    5700

TTCCGTCCGT GTTCAGTTAC ATAAATTCTC CGACGAGCTT TTACTCGTTC TTAGTTTGAT    5760

TGTTTAAAAA CTTCCATCAT CTCGATAAAC TCGTCAAATA GGTAGCTAGC GTCGTGTGGC    5820

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CAAGCGTTTC AAAATCTGCA TATTGGATTT GGCAACGCGT GAGTGGTCCA AGTCACCTGC    7320

AATAGCAACT TTAAGACCCT CAAAGTGGCC AAATTCCTCA TAAATGGTCA TCAAATCAAG    7380
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786

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CAAGCTCTGG CTAGGGTGTT GGCCCGAACC ATCTCCACCA TTGATGATGG AAGTCGTAAT      7440

CGTTGGACTA GCAATCAATT CTCTATAGTA GTCGACCTCT GGATGGCGAA TCACACAGAC      7500

ATCCACTCCT AAAGCAGACA GAGTCAAAAT GGTGTCATAA AGTGTCTCAC CCTTATTAAC      7560

CGAGCTAGTC TTCACATCAA AGTCAAGTCG TTCCAATCCA AGTTTAATCT CTGCGACTTC      7620

AAAGGACTTA TGTGTCCGTG TAGAATCCTC AAAGAAGAGA TTGGAAACAA TCGGATGGTC      7680

TTCATAGGGA AGCTGGGCTC CATTTTTAAA CTCAATTCCT CGCTTGATCA ATTTCATTAC      7740

TTGATCGACA GTGAGGTCTT CCATGGACAC CACATGGTTC AATGCTTGTT GATTTTCTGA      7800

CATGGCTACT CCTTTAACTT TCTAAGCTTC TTCAGTAATC AGAACTCTGT CTTGGTCATC      7860

AAGTTCTGTC ATCTCTACGA TGATTTCTTC AGAACGACTG GTTGGGATAT TTTTTCCAAC      7920

GTAATCTGGA CGGATTGGCA ATTCTCTATG TCCACGATCG ACTAGAACTG CTAAACTCAC      7980

ACGCGCAGGA CGACCATGAC CGACAATATT ATCAATAGCA GCACGGATGG TACGACCTGT      8040

ATAGAGCACA TCATCCACCA AGATAACTTC GCGGTCTGTC ACATCGACAG AAACCAAAGA      8100

AGTATCTTCT CCACTTTTAA CATCATCACG GAAAGGTTTA GTATCCAATT CCACAACAGG      8160

AACTGAAAGA TTTTCTAACT GCTTCAAACG TTCTTGGATT CGGTGGGCAA TAAAGACACC      8220

ACGAGTTTTA ATACCAGCCA AGACGATCTT ATTCAAATCT TTGTTGCGTT CGATAATCTC      8280

ATAAGTAATA CGCGTAATCG CTCGTTTGAC GGTCAATTCG TCTACAACTT CTTTTGTTTT      8340

CATGACAAAC CTCCAAAAAG AAAAGTCTCC TTAAACAAGG AGACTTGAAA TTTATAGCCA      8400

AGCGAGCCCT ACTGCACACA GTATAGACTT CACCCTTCTA CTTTATCGCG CTCCTTGCCT      8460

GCCTCACGGG ACAGGTTTAA AGGAATATTT AGTTATCATT TACTATAGCA CAAAGCATGC      8520

TTAAAATCAA GCAAAAAGTT TCAATGTAGC ATCTTACAAA TTGCTAAAAT CATATAATTG      8580

TGGGTACTGG TCACACTCTG GATTTTTTGG ATGGCAAATG GCTCTTCCAA AATAAATCAT      8640

GGCCTGATGG GCAGCTAACC ACTGCTCAGG CGGCAAGATA TCCATGACCC GCTTTTCCAC      8700

CTCAAGTGGC GTCGCTGATT TTTTGACAAT ATCGTGGTGT TTGCAAATAC GCTCCACATG      8760

AGTATCCACT GCAAAGGCTG GAATTCCAAA TCCTACACTC ATGACAACAT TGGCTGTCTT      8820

GCGACCAACA CCTGCCAAAC TCTCCAATTC TTCACGTGTC TGAGGGACTT GACCATCAAA      8880

ATCGTCTAGT AACTGTTGGG CACATTTTTT AAGGAATTTA GCTTTATTCC GATACAATCC      8940

CAAGCGAGAA ATATGTGAAG CAATCTCACT CTCTGTCGCT ACAGACATAG CTTGGGGTGT      9000

TGGAAAGGCA ACAAAGAGAC CTGGTGTGGC CTTATTTACC GCTGCATCTG TCGTCTGGGC      9060

TGATAACATG ACCGCAACCA GGAGTTCAAA ATGATTGGTA AAATCAAGAC TAGGCTTGGC      9120

ATCTGGGAAG AGGGCAATGA TTTCTTCTAG CACCTTTCGT GCTCGTTTTT TTGACAAGAC      9180
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787

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CATTATTCAT CTCCGTCAAA TAGTCCTTGT AAGCCAGCAA AAGGACTGTT TTCTTCTTTC      9240

TTTACTGCTT TTTGAGCTTG GTATTCTTCC TCTGTCATGA TTTGCCAGTC ATTTCCTGAG      9300

ATAAATCCTT GACCAGCTTC TTCTTCAGCC GTCAAGACCT TGATAGGAAT GTTTAGCAGG      9360

ATATTGTCTG ATACACTCTC AGCAAGGTCA AGCTCCCCAT TTTCGATGGG CAAGACCAAG      9420

TCATCATCTA AAACTTCTTG ATCTAGCTGG TTAGTTGCGC CTTCCATGAA AACTTCCGTG      9480

ACTGGATAAG ATTCAACTAA CTCAACTGGC TCCATACTGC GACTCGACGC AAGAACAATG      9540

GTATAAGATA GTTGATAATC TAAGAAATAC ATACGGTCTT CATATTGTAC TTTCCCAACT      9600

GCAAGGATAT CTTTTACATC TAAAATTTCT TGATTACGTG CACGCAGGTC ATCAACTAAA      9660

TCTAACGTTT GTTCAAAGTT CAAACCTTCA GACTGCTTAC GAATTTCTTG AATATTTAAT      9720

TTCATACTTC CTCCATAAAG ATTTACTCTC TTGATTATAC CATGAAAAGG CTACAAATCA      9780

GCACACCAAA CTTTGTAATT AAAAATTCAAA ATTTTAACAT ATTTACTATG ATAGTTTTAT      9840

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GACAAGAAAC TCATTCAACT CCTATCCAAG TTAAATAAAA GCTACCAAAA CTGTAAACAG      9960

GGTACGGCAG ATGATATTCG ACTACAAGAG CTGCTAAACA CTACTATGCA AGAGCTCAAA     10020

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CTATCAGTCA CTGGCCTACA TTCCTCAAAA AGTCCCTGAG GACCTAAAAA AGAAAACTTT     10740

ACACGACTAC TTCTTTTTAG ATTCTATTGA TTTAGACTAC AGTATCCTCT ATCGTTTGGC     10800

GGAGGAATTG CATTTTGATA GCAATCGTTT CGCAAGTGAC CAAGAGATTG GCAATCTATC     10860

AGGGGGCGAA GCTTTGAAAA TTCAGCTTAT CCATGAGTTA GCCAAACCCT TTGAGATTCT     10920
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788

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ATTTTTAGAT GAACCTTCAA ATGACCTAGA CCTTGAGACA GTTGATTGGC TAAAAGGCCA   10980

GATTCAAAAG ACCAGGCAAA CCGTTATTTT CATTTCCCAT GATGAAGACT TTCTTTCTGA   11040

AACGGCAGAC ACTATTGTTC ACTTGCGACT GGTCAAACAC CGTAAAGAAG CGGAAACGCT   11100

AGTAGAGCAT TTAGACTATG ATAGCTATAG TGAGCAGAGA AAGGCTAATT TTGCCAAACA   11160

AAGTCAGCAA GCTGCTAACA ACCAAAGAGC CTACGATAAA ACCATGGAAA AACATCGGAG   11220

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ACCATTACCA GCTTCTAAAG TCTTAGTCCA ACTGGAAAAA GAAAATTTGT CCATTGACGA   11460

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CGGGCCAAAT GGTGTTGGGA AATCAACTCT GTTAGCCAAG TTACAGAGAC TTCTGAATGA   11580

TAAAAGAGAG ATTTCACTTG GTTTTATGCC ACAAGATTAC CACAAAAAAC TGCAATTGGA   11640

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TCTCCTGCTG GATGAACCCA CACGAAACTT TTCTCCCACT TCTCAACCCC AAATCAGAAA   11880

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CACATCATAC GACCTGCCAT ACTAGAAAGC ATGGTGATAG CACTAGCAAG GGCAACTGCA   12480

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TCTAGTTCTT CACGATTCAT GATAGCTAGT AGACCTGAAG TCGCAGCAAC AGCCGCATTT   12600

TGAGGATTAG AAACCTGTCGC AAAGGCATTT AAGGCTGGAT CATCAATGAT GAAAACACGG   12660

GGCATAGGAA TCTGAGCGAC CAGAGCCATA TCTTCCACTA CATGGTAGAG GTCTGGTGCC   12720
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789

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GTTTGCTCAT CCACCTCACG CGCTCCATTC ATGGACATGA CAATCTCTGT CGATTGAAAA    12780

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GATCTTATAA AGAGATAACC AACCGCATAA CCAACAAGAG CTAAGAGTAG GAAAAATACC    12900

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TACATTGTAG TTGCTGACAA CACTGTTATA GAGTTGACGA GAGTAAGAAA TTTTATTTTC    13140

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GCTTTCTGCA ACTGCAAAAA TACCTGAAAC CTGACGAGTG AGGGCATCAC TGGCTTTCAT    13260

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ATTGCGACGT TTCAACTGAA CATCAATCTG ACTCCAAGCC TCCTTGGTTT GCATACGATT    13440

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AAGGTTGGTG GCAAACTATT AGCACTCAAG GCTAGCAATG CGCCTGAGGA ATTATTAGAA    14160

GCTAAGAATG CCCTCAATCT CCTTTTTAGT AAGGTCGAAG ACAATCTCAG TACGCCCTAC    14220

CGAATAGAGA TCCGCGCTAT ATCACAGTGG TAGAAAAGAA AAAAGAAACA CCAAATAAAT    14280

ATCCACGTAA GGCTGGTATG CCAAATAAAC GCCCACTTTA AATTTTTTAG TAAACAAATG    14340

TTTACAAAAT CAGCCTCGCT CTTTTATTTC TAGGCTCGGG AAAAAATGAT TTACAAAATC    14400

AGCCTCGCTC TTTTATTTCT AGGCTCGGGA AAAAATGATT TACAAAATCA TTTTTTTCTG    14460
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790

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CTATACTATC CTAAGCAAAG GTTTTTAATG TCATCCCGTG AGGTGACGAA GACGCAGAAA      14520

TATTTAAAAC TCTTTAAAAT CTAAATTTTA AAGAAGTCTT ACTCTGAGGG CCTATTGCTG      14580

TAAAATAATG GGCTCTTTTT TGATGCCCAA AAGTGAGGTT TATATGAAAC AAGAATCAAC      14640

TGTTGATTTG TTAC                                                       14654
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(2) INFORMATION FOR SEQ ID NO: 107:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6405 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

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AGAAAAATCT GCTTTACAGA AAATAAAAAT AATAGGAGAA AATCTATGTC AGATTTGAAA      60

AAATACGAAG GTGTCATTCC AGCCTTCTAC GCATGTTATG ATGATCAAGG AGAAGTAAGC      120

CCAGAACGTA CGCGTGCCTT GGTTCAATAC TTCATTGATA AAGGTGTTCA AGGTCTTTAT      180

GTCAATGGTT CTTCTGGTGA ATGTATCTAC CAAAGCGTTG AAGATCGCAA GTTGATTTTG      240

GAAGAAGTCA TGGCGGTAGC AAAGGTAAAT TGACCATTAT TGCCCATGTT GCTTGCAATA      300

ATACTAAAGA TAGTATGGAA CTTGCTCGCC ATGCTGAAAG CTTGGGAGTA GATGCTATTG      360

CAACGATTCC ACCAATTTAT TTCCGCTTGC CAGAATACTC AGTTGCCAAA TACTGGAACG      420

ATATCAGTTC TGCAGCTCCA AACACAGACT ACGTGATTTA CAACATTCCT CAATTGGCAG      480

GGGTTGCTTT GACTCCAAGC CTTTACACAG AAATGTTGAA AAATCCTCGT GTTATCGGTG      540

TGAAGAACTC TTCTATGCCA GTTCAAGATA TCCAAACCTT TGTCAGCCTT GGTGGAGAAG      600

ACCATATCGT CTTTAATGGT CCTGATGAGC AGTTCCTAGG AGGACGCCTC ATGGGGGCTA      660

GGGCTGGTAT CGGTGGTACT TATGGTGCTA TGCCAGAACT CTTCTTGAAA CTCAATCAGT      720

TGATTGCGGA TAAGGACCTA GAAACAGCGC GTGAATTGCA GTATGCTATC AACGCAATCA      780

TTGGTAAACT CACTTCTGCT CATGGAAATA TGTACGGTGT CATCAAAGAA GTCTTGAAAA      840

TCAATGAAGG CTTGAATATT GGATCTGTTC GTTCACCATT GACACCAGTG ACTGAAGAAG      900

ATCGTCCAGT TGTAGAAGCG GCTGCTGCCT TGATTCGTGA AACCAAGGAG CGCTTCCTCT      960

AATCTAAAAG GAGGTATTTA TGACATATTA CGTTGCAATT GATATCGGTG GAACCAACAT      1020

CAAGTATGGT TTGGTTGATC AAGAGGGGCA ACTTCTTGAA TCGCATGAAA TGCCAACTGA      1080

GGCGCATAAG GGTGGACCTC ATATCTTACA AAAGACCAAA GATATCGTAG CTAGTTATTT      1140

AGAAAAAGGC CCAGTAGCAG GTGTTGCCAT ATCTTCTGCT GGGATGGTGG ATCCGGATAA      1200
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791

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GGGTGAGATT TTCTATGCTG GGCCGCAAAT CCCTAACTAC GCAGGCACCC AGTTCAAAAA    1260

GGAAATCGAA GAAAGCTTTA CTATTCCTTG TGAGATTGAA AATGATGTCA ACTGTGCAGG    1320

TCTTGCTGAG GCAGTATCTG GTTCAGGCAA GGGAGCAAGT GTGACACTTT GCTTGACCAT    1380

TGGAACCGGT ATCGGTGGTT GCTTGATTAT GGATAGGAAA GTCTTCCATG GTTTTAGCAA    1440

TTCAGCCTGT GAAGTCGGGT ATATGCATAT GCAGGATGGA GCTTTTCAAG ACTTGGCTTC    1500

TACAACAGCT TTAGTGAAAT ATGTAGCTGA AGCCCATGGA GAAGATGTTG ATCAGTGGAA    1560

TGGCCGTAGA ATTTTCAAAG AAGCCACTGA AGGAAACAAA ATCTGCATGG AAGGTATTGA    1620

CCGTATGGTT GACTATCTAG GAAAAGGTCT GGCAAATATT TGCTACGTTG CCAATCCAGA    1680

AGTGGTTATT CTTGGTGGTG GTATCATGGG GCAAGAGGCT ATCCTCAAAC CTAAGATCCG    1740

TACAGCCTTG AAAGAGGCTT TGGTACCAAG TTTAGCAGAA AAAACACGAT TAGAATTTGC    1800

CCATCACCAA AATACAGCAG GGATGTTGGG TGCATATTAT CATTTTAAGA CAAAACAATC    1860

CTAGTTTGGC TCAGCCAAAC TAGGATTTTC TTACACGTTT TTGTCTACGA TAGCCGTTGA    1920

GTTTTTTATT TTCCCAGTAG CTATTAAAGA TTTTTTCCTT GCTTTCGCGA TTGATTTCCA    1980

AAAAGTAGGC ATAAATCAAA TCGATAAAGA AGAGCATAGG AAGTTGAGCG GATATTCGTT    2040

GGATATAGGA GGGTTGGCTG TGGGTGGCTA CAAGAACAGT CTCTGTATAG GTCTGGCTAT    2100

CTTTATTGGG AACACTTGTA AAGAGTACAG TCTTTGCCCC CATCTCCTTA GCATCTAATA    2160

GACTATCTAA AATAGAAGGA GTTGAGCCTG AAAGTGAGAA GCCCAGTACT AGACAATTTT    2220

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CAAAGAAGTA GATACGCTCA GCATCTTCGA TTAGCTGGGC AATTCGTTCT AGTTGGATTT    2400

CGTCAATCAA GTCTTGTGTT TGTTCCCTCA TATTGCTATA ACTTCTGAGG ACTCGTTTGG    2460

TCAGTGGACT GTGCTTGGAG ACTTGGTTGG CTTGATTTTC TGCCTGATGT TGGTATTGGA    2520

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GAGAAATATG TAATTTTTGG GTGACTTGTT GAGAAGATAA ATCATCTGTA ATCGTTTCAG    2640

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CAATGATAGT TGCGATATCT GGTTTGTCCA TAGGGAAAGC TCCTTTACAT GAGTCATACT    2760

GGAAGACTAG ATCAGAGAAT AGTCACACTT CATTATAACA CATAATATAA GGATAGATAA    2820

ATAAAAACGC ATCTCTGTTT TAAAAACGAA AAAATCGAAA AAGCTTCTCT CTTTTCCATA    2880

ATTTTCTACT CAAATTGTGG TACAATTAAG AGTAAGATTT TAAGTTAGAA ATGAGACTGA    2940
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792

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TTTGTATGAG AAAATTTAAC AGCCATTCGA TTCCGATTCG GCTTAATTTA TTGTTTTCAA      3000

TCGTCATTTT ACTCTTTATG ACCATTATTG GTCGTTTGTT GTATATGCAG GTTTTGAACA      3060

AGGATTTTTA CGAAAAAAAG CTAGCTTCAG CTAGTCAGAC CAAGATTACA AGCAGTTCAG      3120

CCCGTGGGGA AATTTATGAT GCTAGTGGAA AACCTTTGGT AGAAAATACG TTAAAGCAGG      3180

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ACTATTTGGC TGATCCTGAA ATCTATAAAA AAATAGTGGA AGCTCTCCCA AGTGAGAAAC      3360

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CTTCTTGGGA TAGAAAGGTT TTGGAAACTT CCCTTTCTTC TATAGTTGGG AGTGTATCCA      3660

GTGAAAAAGC TGGTCTCCCA GCGGAAGAAG CAGAAGCCTA TCTTAAAAAA GGCTATTCTC      3720

TAAATGACCG TGTAGGAACC TCCTATTTGG AAAAGCAATA TGAAGAGACC TTACAAGGAA      3780

AACGCTCGGT AAAAGAAATC CATCTGGATA AATATGGCAA TATGGAAAGC GTGGATACAA      3840

TTGAGGAAGG TAGTAAGGGA AACAATATCA AACTGACCAT TGATTTGGCT TTCCAAGATA      3900

GCGTGGATGC TTTACTGAAA AGTTATTTCA ATTCTGAGCT AGAAAATGGT GGAGCCAAGT      3960

ATTCTGAAGG TGTCTATGCA GTCGCCCTTA ACCCAAAAAC AGGTGCGGTT TTGTCTATGT      4020

CAGGGATTAA ACATGACTTG AAAACGGGAG AGTTGACGCC TGATTCCTTG GGAACGGTAA      4080

CCAATGTCTT TGTTCCAGGT TCGGTTGTCA AGGCGGCGAC CATCAGCTCA GGTTGGGAAA      4140

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GTGTTCGTGT GGCTCCTCGT ATTGTTGAAG GCATTTATGG TAATAATGAT AAGGGAGGAC      4620

TGGGTGACTT GATTCAGCAA CTGCAACCGA CAGAGATGAA TAAGGTCAAT ATATCCGACT      4680

CCGATATGAG CATCTTGCAC CAAGGTTTTT ATCAGGTTGC CCATGGTACT AGTGGATTGA      4740
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793

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CAACTGGACG TGCCTTTTCA AATGGTGCCT TGGTATCCAT TAGCGGAAAA ACAGGTACAG       4800

CCGAAAGCTA TGTGGCAGAT GGTCAGCAAG CAACCAATAC CAATGCGGTG GCCTATGCCC       4860

CATCTGATAA TCCCCAAATC GCTGTCGCAG TGGTCTTTCC TCATAATACC AATCTAACAA       4920

ATGGTGTAGG ACCTTCCATT GCGCGTGACA TTATCAATCT GTATCAAAAA TACCATCCAA       4980

TGAATTAGAA AGGAAATTAT GCTTTATCCA ACACCTATTG CCAAGTTGAT TGACAGTTAT       5040

TCTAAGTTAC CAGGTATCGG GATTAAGACG GCTACGCGTC TGGCCTTTTA TACGATTGGG       5100

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CCGACTCGTG ACCAGACAAC AATTTTAGTT CTTGAGGATA GTAGAGATGT GGCAGCCATG       5280

GAAAATATCC AAGAATACCA TGGACTCTAT CATGTCCTTC ATGGCCTCAT TTCTCCTATG       5340

AATGGTATCA GTCCGGACGA TATCAATCTC AAGAGCCTTA TGACTCGTCT TATGGATAGT       5400

GAGGTTTCAG AAGTGATTGT GGCGACTAAT GCTACAGCGG ATGGTGAAGC GACTTCCATG       5460

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TGGTATTGCC CAAGTTCCTT ATGTGGCTAT CGTTGAAGGC GATGATGTGA CTGCTAAAAT       6240

CGCTGAAGTG GAAGAAAAAT TGGCTTATCC AGTCTTCACT AAGCCGTCAA ACATGGGGTC       6300

TAGTGTCGGT ATTTCTAAGT CTGAAAACCA AGAAGAACTC CGTCAAGCCT TAAAACTTGC       6360

CTTCCGATAT GACAGCCGTG TCTTGGTTGA GCAAGGAGTG AATGC                       6405
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(2) INFORMATION FOR SEQ ID NO: 108:

794

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 11309 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

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CGAGCTCGGG TACCGGGATT TTAAGGAGTT TGATATGTAT AACCTATTAT TAACCATTTT        60

ATTAGTATTA TCTGTTGTGA TTGTGATTGC AATTTTCATG CAACCAACCA AAAACCAATC       120

CAGCAATGTA TTTGATGCCA GTTCAGGTGA TTTGTTTGAA CGCAGTAAAG CTCGCGGTTT       180

TGAAGCTGTA ATGCAGCCGTT TGACAGGGAT TTTAGTCTTT TTCTGGCTAG CCATTGCCTT      240

AGCATTGACG GTATTATCAA GTAGATAAGA AAATAATGGG CAGGACTAGG TCTTTGCCTC       300

TTTTTATTTT TAAAGGATGT TTGAGAAGGT TTTACAGTAA AAGAAAATTA AAAAATCTAG       360

AAAGAAAATA TGAAAGATAG AATAAAAGAA TATTTACAAG ACAAGGGAAA GGTGACTGTT       420

AATGATTTGG CTCAGGCTTT GGGAAAAGAC AGTTCCAAGG ATTTTCGTGA GTTGATTAAA       480

ACCTTGTCCT TAATGGAAAG AAAGCACCAA ATTCGTTTTG AAGAAGATGG TAGTCTGACA       540

TTAGAAATTA AGAAAAAACA TGAGATTACC CTCAAGGGGA TTTTTCATGC CCATAAAAAT       600

GGCTTTGGCT TTGTTAGTCT GGAAGGCGAG GAGGACGACC TTTTTGTAGG GAAAAATGAT       660

GTCAACTATG CTATTGATGG TGATACCGTC GAGGTAGTGA TTAAGAAAGT CGCTGACCGC       720

AATAAGGGAA CAGCAGCAGA AGCCAAAATT ATTGATATCC TAGAACACAG TTTGACAACA       780

GTTGTCGGGC AAATCGTTCT GGATCAGGAA AAACCTAAGT ATGCTGGCTA TATTCGTTCA       840

AAAAATCAGA AAATCAGTCA ACCGATTTAT GTTAAGAAAC CAGCCCTAAA ATTAGAAGGA       900

ACAGAAGTTC TCAAAGTCTT TATCGATAAA TACCCAAGCA AGAAACATGA TTTCTTTGTC       960

GCGAGTGTTC TCGATGTAGT GGGACACTCA ACGGATGTCG GAATTGATGT TCTTGAGGTC      1020

TTGGAATCAA TGGACATTGT ATCCGAGTTT CCAGAAGCTG TTGTTAAGGA AGCAGAAAGT      1080

GTGCCTGATG CTCCGTCTCA AAAGGATATG GAAGGTCGTC TGGATCTAAG AGATGAAATT      1140

ACCTTTACCA TTGACGGTGC GGATGCCAAG GACTTGGACG ATGCAGTGCA TATCAAGGCT      1200

CTGAAAAATG GCAATCTGGA GTTTGGGGTT CACATCGCAG ATGTTTCTTA TTATGTGACC      1260

GAGGGGTCTG CCCTTGACAA GGAAGCCCTT AACCGTGCGA CTTCTGTTTA CGTGACAGAC      1320

CGAGTGGTGC CAATGCTTCC AGAACGACTA TCAAATGGCA TCTGCTCTCT CAATCCCCAA      1380

GTTGACCGCC TGACCCAGTC TGCTATTATG GAGATTGATA AACATGGTCG TGTGGTCAAC      1440

TATACCATTA CACAAACAGT TATCAAGACC AGTTTTCGTA TGACCTATAG CGATGTCAAT      1500
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795

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CGTTATTCGG AGCACAATCA CGGCCACTAT GGACTAGCTG CTGACTATTA TACTCACTTT    2040

ACCAGTCCAA TTCGTCGTTA TCCAGACCTT CTTGTTCACC GTATGATTCG GGATTACGGC    2100

CGTTCTAAGG AAATAGCAGA GCATTTTGAA CAAGTGATTC CAGAGATTGC GACCCAGTCT    2160

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GAGTATATGG AAGAATACGT GGGTGAAGAG TATGATGCAG TTGTATCAAG TATTGTCAAA    2280

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CGCGCGTGTG ATGAAAGCTG TTAATCAGCG ATAAAAAGAG GAATTGAAAA TGGAAAAATT    3180

AGTTGCCTAT AAACGCATGC CTTTGTGGAA TAAACAAACA ATGCCTGAAG CTGTTCAGCA    3240
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796

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AGACAATCCA ATGGCCCAAC CTCAAGCCTG GCACCGAGTG GAAGCTGCCA CAGATGATGT    3420

GGAATGGTAC TTGGAATTTT ATTGTAAACC TGAGGATTAT TTTGCTAAAA AATACAATAC    3480

CAATCCTGTT CATTCAGAGG TCCTAGAGGC CATGCAGACA GTGAAACAAG GGAAAGCTTT    3540

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CCAGATTGAA CAAGACTTGA CTAGCTATTA TCAGCACTTT TATACCTATT ACCAAAAAAA    4980

TCCTCAAAAT GATTGGCAAA AGCTTTATCC ACCAGCCTTT TATCAGCAAT ATTTCTTGAA    5040
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797

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AAATATGGTA GAATAGAAAG GATGGAGGAA TCTAATGGTA TTACAAAGAA ATGAAATAAA    5100

TGAAAAAGAT ACATGGGATC TATCAACGAT CTACCCAACT GACCAGGCTT GGGAAGAAGC    5160

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CATTCCACAC TTCTACTATA ACTACTATGT ATATCAATAT TCAACTGGCT TTGCGGCCGC    6660

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CTACCTCAAG GCAGGTAAGT CGGACTATCC ACTTAATGTC ATGAGAAAAG CTGGTGTTGA    6780
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798

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GTTTGAAGCC CTTGTTGAAA AATTAGGATT GGCATAAAAT GGTTGAATCG TATAGTAAGA    6900

ATGCTAACCA TAACATGCGT CGTCCTGTCG TCAAAGAAGA AATTGTAGAC TTGATGCGTC    6960

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CGGTGGATGT CTTATCTACA CTGACAGAGT CTTATGATTT CGTCTTTATG GATTCTGCCA    7320

AGTCTAAATA CATCGTCTTT CTGCCAGAAA TCCTCAAACA TTTGGAAGTT GGTGGTGTGG    7380

TTGTCTTGGA TGATATTTTT CAAGGTGGTG ATGTTGCCAA GGATATTATG GAAGTCCGTC    7440

GTGGTCAGCG AACCATTTAT CGAGGCCTTC AAAAATTATT TGATGCAACC TTAGACAATC    7500

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ACCAAGCCTT CCAAAATATC TTTACCCAAT ATATCGGTGG TGGAGATTCA AGCTCAAGCA    8580
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799

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AAAGTTAGAC AATTAATTTA TCCGAAGGAT TTAGTTCTGT ATTGCACAGA GCTAAGTCCT    8760

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AGGAACGATT TCTAAAGAAC AGGGGGTATA GAGTTGACTT TGGATAATCT CAGCAGATTT    10260

GACCGCTCGA GGTAAATCAC TTGAATAAAT CTGATCAAAA GGAATTTCCT TGAGATACTG    10320
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800

ACCAAGTCGT TTTAGGGTTT CAATGGATTC AGGAAGAAGA GGAGAATCAC CACTAGCACC   10380

TTGAAAACGA CCTTCTTGGT TCCAGAGGGT ACGACCGTGG CGGACAAAGT AGAGTTTCAT   10440

TACTTGATGT CCTCCAAAAT ATCTACAAAG TCTGCCTTTA CAAAGCTAGC CAAGTCTTGT   10500

GGCGCGACGA TAATGCTGTG TCCGACTTCG CCTGCAGAGA CAATCATTTG ATCCAAATCT   10560

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CATGACCTGC CTCGACTAGC GGACGCATGT AACGGTAGAA AAATGTCAAG AGCAAGGTCT   11280

GGATATGGGC ACCGTCGGTA TCCGCATCG   11309

(2) INFORMATION FOR SEQ ID NO: 109:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5548 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

CCATAGTCTA ACAAGTCTTT GTAAAGGTTT ATCCCTGATT CATGTAAAGA TTGTGTAAAG   60

AATCAAAAAA AGCCACTTTT GAAAAATGGC TGCTCCTAAA AATAGCTTTA AAAATTATTA   120

GTCCTGTGCG AAAGATTGGT TAGGAAGAAA AATCGTGAAG CAACTGCCTC TGCCAAGCTG   180

ACTCGTCACC GTGACTTGGC CACCTAATAA TTGACTGAGT TCTTTGACAA TGGCAAGGCC   240

AAGACCAGTG CCACCAGTTT GTCTGCTTCG ACCTTTATTA ACTCGGTAAA AACGTTCAAA   300

AATACGATCC TGCTCTAATT GACTAATACC AATCCCTGTA TCTGATACAG AAATCTTAAT   360

GCCTTCGTTC ACCTTTTGGG TCTTGACCTC AATTTTTCCC CCTTGTTCAG TGTAACGGAT   420

801

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GGCATTGGAT AAAAGATTGA GTAAGATTTG GGAAAGTAAT TGACTATCTG ATACGAGGGT        480

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TTGTTGAGCC TTAGATAAGG TAAGAAGATG CTCAACAATA TGCTCAAGAC GCAAACTTTC        660

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AATGGTTTCA GCAAAGCCCT TAATCGAAGT AACTGGTGTC CTCAATTCAT GGGAGGCATT        780

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GACGAGCACA GCTTCCACAG ATTGGGTGGG GCTAAAAACG GGAACTGCTG TCACTTCTAA        900

AATCAAGTCA CCCTCATGAA ACCCACTTAC TTCTTGTTTT AACCTTGTTT TTTGATCAAA        960

GGCTTGGTGA ACTAAATTCC GAATATCCAT CCGTTTGAGG TCATCAAGTG AACTTATGTC       1020

GCCGTCCACA TCGGGAAAAT AATGAGGCAG AGAGCCGACTG GATAATAACA TCTGACCTTG       1080

AGCGGAAACT AAAAACGTCC CCATGGTTAG GTGCGACAGA AGAACCTCCA TTGTTTCGGC       1140

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GCGTTTCATC TATAACTCCT TGAACTTATA ACCATAACCC CGAATGGTTC GAATAAATTG       1500

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TAGCCAAGAA TCGTCAGCGA TATTATCTGA ATCATCTCCT TCTTGTTCTC CTTTAGTTCG       1800

CCTGAGGACA GCCTTGACAC GCGCCAGCAA TTCTCTAGGG CTAAAAGGCT TGGTCAGGTA       1860

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TAAGGCCTTC CGTCCATTTG TCACCAATTG AGTAGAAAAG CCTTCCTTAC TTAAATGGTA       2100

GTCAAGCAAT TTCAGAATGT GTTCTTCATC ATCCACTAAT AAGACTTGTT TTGTCATCTA       2160
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802
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TTATCTCCTA TTGGTAACAT TATAACACAA TTATCAGAAA TCCTAACATT GCTAAATCAG    2220

ATTAAATTTG CCTATCAAGA CTAGTATCTG GTCAAACGCT CAATCATCTC CTTGTGCTCT    2280

GGATAGGTCG CCAGTAGATC TACCCTTTCA AATAATTCAA AATCCTCAAA TTCAAAACCA    2340

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TACCAGATTT CATCTGCTGT CAATCGGTGA AAATGTGAAG GATTCGTTTC TTCTAATAAG    2580

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CGATTTCAAG AACTCCTCTC AGTTCTGAGG ACACGGTAAT GATTGATGCG ACGGAAGTAC    2820

AAATCAATCG CCCTAAAAAA AGAATTAGCG AATGATTCTG GTAAAAAAAA TGCCACGCTA    2880

TGAAGGCTCA AGCGATTGTC ACAAGTCAAG GGAGAATTGT TTCTTTGGAT ATCGCTGTGA    2940

ACTATTGTCA TGATATGAAG TTGTTCAAAA TGAGTCGCAG AAATATCGGA CAAGCTGGTA    3000

AAATCTTGGC TGACAGTGGT TATCAAGGGC TCATGAAGAT ATATCCTCAA GCACAAACTC    3060

CACGTAAATC CAGCAAACTC AAGCCACTAA CAGTTGAAGA TAAAGCCTAT AACCATGCGC    3120

TATCCAAGGA GAGAAGCAAG GTTGAGAACA TCTTTGCCAA AGTAAAAACG TTTAAAATGA    3180

TTTCAACAAC CTATCGAAAT CATCGTAAAC ACTTCGGATT ACGAATGAAT TTGATTGCTG    3240

GCATTATCAA TCATGAACTA GGATTCTAGT TTTGCAGGAA GTCTATTATT TGGTTAGGTG    3300

AATTAGTGAA GCGTTTAGGC AAGTGTCTCT GGTTACGACG TCATGGACTC TAAATCGATT    3360

ATATTTAGGG GTCATGACTA GTGAAGCAGT TAGCTAGTTC GCATATAAGC GGCTAGCGTC    3420

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GATCATATTT ATGTCCTAAA ACTAGTGAAG CGCCTAGCCA AAGTCCGAAT AGGATTNjGC    3540

GTTAGTTACT TAGATTGCTT TGCAATCAAG TAACTTTGGC GATTTACATC TTCTCTGGCG    3600

CTTCTACTCC AAGCAAGCGA AGGGCTTCTT TGAGAACGAC TGCGGTTGCG TAGCTGAGGG    3660

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TAAAGGATTG AGCCAGGCTA ATTGCAAATT TAGCAATGAT AGAAGGTTCA AAGTTATCTG    3780

CCGCACGGTT GATAATACGT GGGAAGTCTT GAATGAGTTT AATGATTTCC CAGCTTTCAG    3840

TATCATTCAA GCTATAGTTG CCAGCTGTTT CTGGTTTGAA ATCGGCTTTG CGTAAGATAG    3900

ATTGGATACG AGCGTAGGCA TATTGAACGT AAGGTCCAGT TTCACCCTCG AAGGATACCA    3960
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TAGCCTCTAG GTCGAAGTCG TATCCATTTG TACGGTCGGT TTTGAGGTCA TAGAATTTAA      4020

TGGCTCCAAT CCCAACAGCA TGTGCTACTT GGTCTTTGTT TTCTAGTTCA GGATTTTTAG      4080

CCTCGATTTG GACCTTGGCA CGGCTAACAG CCTCTGCAAC AGTAGGCTCT AGCAAGATGA      4140

CATTCCCTTT ACGAGTAGAG AGTTTCTTCC CTTCTTTTGT AACCAAACCA AAAGGAACGT      4200

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CAGCGTTGAT GCGGACATAG AGTTTAAGGA GTTCATCGAT TGGATGAGCT TTTACAGCTT      4740

CTTCGTCGCC CCATTTTTTG TAGGCAACAA TCAACATCCC AAATTGTTTA CCCCAGTCTC      4800

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CTCCGATAAC AGTTGAACGC AGGTGGCCAA TAGAAAATGG TTTAGCGATA TTCGGACTAG      4920

ACATGTCGAT AACAACATTT TCTTGTTTAC CAATATTTTG GTCAGCATAG TGTTCTTTTT      4980

CAGTGGTAAC AGCTTGCAAT ACTTGAGCAG AAATGGCAGA TTTATCAAGG AAAAAGTTAA      5040

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GAAATTAAGT ACACAAAAAG AAATTCAAGA TCGGTTGGAG GCGCACAATG TTTGTGTGAC      5520

GCAGACAACC TTGTCTCGTG ATTTGCGG                                        5548
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(2) INFORMATION FOR SEQ ID NO: 110:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 3132 base pairs

804

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

TACCCGGTAG TCTTAGCAGA CACATCTAGC TCTGAAGATG CTTTAAACAT CTCTGATAAA   60

GAAAAAGTAG CAGAAAATAA AGAGAAACAT GAAAATATCC ATAGTGCTAT GGAAACTTCA   120

CAGGATTTTA AAGAGAAGAA AACAGCAGTC ATTAAGGAAA AAGAAGTTGT TAGTAAAAAT   180

CCTGTGATAG ACAATAACAC TAGCAATGAA GAAGCAAAAA TCAAAGAAGA AAAATTCCAAT   240

AAATCCCAAG GAGATTATAC GGACTCATTT GTGAATAAAA ACACAGAAAA TCCCAAAAAA   300

GAAGATAAAG TTGTCTATAT TGCTGAATTT AAAGATAAAG AATCTGGAGA AAAAGCAATC   360

AAGGAACTAT CCAGTCTTAA GAATACAAAA GTTTTATATA CTTATGATAG AATTTTTAAC   420

GGTAGTGCCA TAGAAACAAC TCCAGATAAC TTGGACAAAA TTAAACAAAT AGAAGGTATT   480

TCATCGGTTG AAAGGGCACA AAAAGTCCAA CCCATGATGA ATCATGCCAG AAAGGAAATT   540

GGAGTTGAGG AAGCTATTGA TTACCTAAAG TCTATCAATG CTCCGTTTGG GAAAAATTTT   600

GATGGTAGAG GTATGGTCAT TTCAAATATC GATACTGGAA CAGATTATAG ACATAAGGCT   660

ATGAGAATCG ATGATGATGC CAAAGCCTCA ATGAGATTTA AAAAAGAAGA CTTAAAAGGC   720

ACTGATAAAA ATTATTGGTT GAGTGATAAA ATCCCTCATG CGTTCAATTA TTATAATGGT   780

GGCAAAATCA CTGTAGAAAA ATATGATGAT GGAAGGGATT ATTTTGACCC ACATGGGATG   840

CATATTGCAG GGATTCTTGC TGGAAATGAT ACTGAACAAG ACATCAAAAA CTTTAACGGC   900

ATAGATGGAA TTGCACCTAA TGCACAAATT TTCTCTTACA AAATGTATTC TGACGCAGGA   960

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GTTGATGTTT TTTCGGTATC ATCTGGTTTT ACAGGAACAG GTCTTGTAGG TGAGAAATAT   1080

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TATGCGACTT CTGCTTCAAG TTCTTCATGG GATTTAGTAG CAAATAATCA TCTGAAAATG   1200

ACCGACACTG GAAATGTAAC ACGAACTGCA GCACATGAAG ATGCGATAGC GGTCGCTTCT   1260

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AGAAATATAG GGGCCTTTTT CGATAAGAGT AAAATCACAA CAAATGAAGA TGGAACAAAA   1380

GCTCCTAGTA AATTAAAATT TGTATATATA GGCAAGGGGC AAGACCAAGA TTTGATAGGT   1440

TTGGATCTTA GGGGCAAAAT TGCAGTAATG GATAGAATTT ATACAAAGGA TTTAAAAAAT   1500

GCTTTTAAAA AAGCTATGGA TAAGGGTGCA CGCGCCATTA TGGTTGTAAA TACTGTAAAT   1560

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TACTACAATA GAGATAATTG GACAGAGCTT CCAGCTATGG GATATGAAGC GGATGAAGGT    1620

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AATCCTGATA AAAAAACTGA AGTCAAAAGA AATAATAAAG AAGATTTTAA AGATAAATTG    1740

GAGCAATACT ATCCAATTGA TATGGAAAGT TTTAATTCCA ACAAACCGAA TGTAGGTGAC    1800

GAAAAAGAGA TTGACTTTAA GTTTGCACCT GACACAGACA AAGAACTCTA TAAAGAAGAT    1860

ATCATCGTTC CAGCAGGATC TACATCTTGG GGGCCAAGAA TAGATTTACT TTTAAAACCC    1920

GATGTTTCAG CACCTGGTAA AAATATTAAA TCCACGCTTA ATGTTATTAA TGGCAAATCA    1980

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GATGACAAAA TAGATCTTAC AAGTCTTACA AAAATTGCCC TACAAAATAC TGCGCGACCT    2160

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GGAGCAGGCC TAATTAATGT GGCCAATGCT TTGAGAAATG AAGTTGTAGC AACTTTCAAA    2280

AACACTGATT CTAAAGGTTT GGTAAACTCA TATGGTTCCA TTTCTCTTAA AGAAATAAAA    2340

GGTGATAAAA AATACTTTAC AATCAAGCTT CACAATACAT CAAACAGACC TTTGACTTTT    2400

AAAGTTTCAG CATCAGCGAT AACTACAGAT TCTCTAACTG ACAGATTAAA ACTTGATGAA    2460

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GGTTATGATG ATGATGGTAA ACCGAAAATT CCAGGAACCT TAAATAAGGG AATTGGTGGA    2880

GAACATGGTA TAGATAAATT TAATCCAGCA GGAGTTATAC AAAAATAGAAA AGATAAAAAT    2940

ACAACATCCC TGGATCAAAA TCCAGAATTA TTTGCTTTCA ATAACGAAGG GATCAACGCT    3000

CCATCATCAA GTGGTTCTAA GATTGCTAAC ATTTATCCTT TAGATTCAAA TGGAAATCCT    3060

CAAGATGCTC AACTTGAAAG AGGATTAACA CCTTCTCCAC TTGTATTAAG AAGTGCAGAA    3120

GAAGGATTGA TT                                                       3132
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(2) INFORMATION FOR SEQ ID NO: 111:

(i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 14672 base pairs

806
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

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CGAGATTTCT TTAAATGAAC TACGTGAAAT CTACCCATCA TCCAGATCTG GATATTCTCT        60

CCTATCTATA AGTAAAGTTT TAGGAGATTT TAATATAAGT TCTCATGCTT TTAAAGCTTC       120

GGTAAGAGAT TTAAAACCGC TCAGTTTCCC ACTCATTTGC TTCTGGGAGA GTTCTCATTT       180

TATTATTCTT GAAAAAATTA GTAAAAACAA GTTTTATATT TTAGATCCTG CAAAAGGCAG     . 240

GCAGAGAATG TCAATAAGTG AATTTGAAAG GCATTATTCA AATATCATTT TAACATTTAA       300

AAAGTTAGAT AGCTTTATGT CTCGTAAAGA TAATAAGAAG TCGCCTGTTT TAAAGTATTT       360

TTTTAAGTAT AGGAATAAGC TAGGGATTTT ATTTTTTGTA ACAGCATTAT TGTATGTAAT       420

ACAATCATTA GTACCTATAG CTAATAGATA CATAATTGAC ACGAATTTCA AGGACGATTC       480

GTATTCGTCT AGAATGTTAT TTACTATATT ATTTATATTT ACTGTTTCAT CTCACTAAT       540

GTATTTATTA AGACAGATAT ATGTTGCATC CTTAAAATAT ATAATGGATA AAGAGATTAG       600

CTATGATTTT ATGAAACATT TGATATATTT ACCTTACAGT TTTTATGAAA AACGTACTTT       660

AGGGGATATA CTTTTTAGAG CTAACTCTAT TGTTTATATA AGAGAAATAC TATCAAATAA       720

TTTTATAGCA GCTATACTTG ATTTGTTAAT GATTGTGGTT TATGCTGTGG TTTTATTTAG       780

CTTTTCTAAG TACATGGTAA TCTTTTTAAT ATCACTAAGT CTAGCTCTAT CTATTGTAAT       840

GTATCCAATC ATAAAAATCT CAAAAAATTT AATTGATAAA AATATAAAAG AAAAGGTTAA       900

TGTTCAAAAT ATTACTTCCG AAGTAATTTC TAAAAATAGT GATATTAAGC TAACTGGAGA       960

AGAGGAATTT TGGATTAACA AATGGGATAA TTTTAATACA AAACAGCTCA TCATAGGTCG      1020

AAAACTTGAT ATACATTTAT CAATTGTTAG TAGTATAACG AATGTTTTAC AAATTATTCT      1080

CCCTGTTTTG ACCCTTATTG TAGGTGTAAA TATAAAAACA TTCGAACAAT TGACGTTAṲG      1140

ACAAATTGTA GCAATAAGTA CAGTCTCACC ATACTTTATT TCTCCTATAA TTTCTTTAAG      1200

TGATAACTAT ATACAATTAA TGTTATTAAA GGGATATTTT TTAAGAATAG AGGATGTGTT      1260

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AATAAATGTT ACTATTAAAA AAGGAGAAAC TGTTGCTATT GTTGGAGAAT CAGGTTCAGG      1440

TAAGAGTACA TTAGCTAAAA TTTTATTAGG TTTATTAGAA CCTAATATTG GTTCAATAGA      1500

AGTTGATGGA GTAGAAAAAG AAGAAATTGG TCAAACATTG TATAGAAAGA TTTTTGGAGC      1560
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CTTTGTTTCA GATGAAGAAT TAATGACAAA TCTAAATTCA ATTGGTCTTA GCAATGTAGT     1680

TAAATCTTTA CCTCTTGGAT TAGAGACAAT CATCGCTGAA GAAGGTAATA ACTTTTCTGG     1740

AGGGCAGCAG CAAATGATAC TTTTAGCTCG TTGTCTTTTG TCGAAACCTT CGGTAGTTGT     1800

TTTGGACGAA GCAACAAGTA GTTTAGATAA TTTATCTCAA CAAATTACAA CTTCTTACTT     1860

AAGTGAAATC GGTACCACTA AGATTTTAAT TGCCCATCGA CTAGATACTA TCAAGTCTGC     1920

AGATAAGATC TTAGTAATGC ATAATGGTGA AATTGTAGAG ATTGGGACCC ATAGAGAACT     1980

TCTTGAACTA GGAGGCATTT ATAAGCAATT GTATTCAAAT AATTAGTTTT TGATTAAAAG     2040

GGTAAATTTA TGAAGATTAT GAAAAAAAAA TATTGGACTT TAGCGATATT ATTCTTTTGT     2100

TTGTTCAATA ATTCTGTTAC TGCTCAAGAA ATACCTAAAA ATCTTGATGG CAATATAACT     2160

CACACTCAGA CTAGCGAAAG TTTTTCTGAA TCTGATGAAA AACAGGTTGA CTATTCTAAT     2220

AAAAATCAAG AAGAAGTAGA CCAAAATAAA TTTCGTATTC AAATCGATAA GACAGAATTA     2280

TTTGTAACAA CAGATAAACA TTTAGAAAAA AACTGTTGTA AATTGGAACT TGAACCACAA     2340

ATAAATAACG ATATTGTTAA CTCTGAAAGT AATAATTTAC TAGGCGAAGA TAATTTAGAT     2400

AATAAAATTA AGGAAAATGT TTCTCATCTA GATAATAGAG GAGGAAATAT AGAGCATGAC     2460

AAAGATAACT TAGAATCGTC GATTGTAAGA AAATATGAAT GGGATATAGA TAAAGTTACT     2520

GGTGGAGGCG AAAGTTATAA ATTATATTCT AAAAGTAATT CTAAAGTTTC AATTGCTATT     2580

TTAGATTCAG GAGTCGATTT ACAAAATACT GGATTACTGA AAAATCTTTC AAATCACTCA     2640

AAAAACTATG TCCCCAATAA AGGATATTTA GGAAAAGAGG AGGGAGAGGA AGGAATAATA     2700

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GATTTTAGCA ATAAAGGGGA TTCTGATGCA ATATATGCGC CTGCAGGCTC AACATTATCT     3240

CTTTCAGAAT TAGGACTTAA TAACTTTATT AATGCAGAAA AATATAAAGA AGATTGGATT     3300
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TTTTCGGCAA CACTAGGAGG ATATACGTAT CTTTATGGAA ACTCATTTGC TGCTCCTAAA    3360

GTTTCTGGTG CGATTGCAAT GATTATTGAT AAATACAAAT TAAAAGATCA GCCCTATAAT    3420

TATATGTTTG TAAAAAAATT CTGGAAGAAA CATTACCAGT AAAAAATGGT ATAAAAGTGT    3480

TAAATATACC AAACGTATTG AGATATGATT TGAATATGTT ACAATTAGAA TATAAAAATG    3540

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TCGTTTTGTG TATAATACGA CCCCTATTTC TTACCAGCAG TTTTTGAAAG ATCCAATCAT    4080

CATTGTTATA ACACCCCAAT CAACTGGTCC ACAGTCCATT TTGTTTTGGA TAGACGCAGT    4140

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CACGGTCAGT TCCACAGTCG TCCTCACGGA TGATAACGTC TTGGGCAACG TCGACCAAAC    7980

GACGAGTCAA GTAACCTGAG TCGGCTGTCT TAAGGGCCGT ATCGGTCATA CCTTTACGAG    8040

CACCGTGAGT TGAGAAGAAC ATTTCCAATA CCGACAAACC TTCGCGGAAG TTTGAAAGGA    8100

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TATCGGCAAT ACCCACTGTC AATCCTGCAA GAGTTGAGTG GTGGTAACCG AGGTTCTTCA    8460

TGCGGTCAAG TAGGGCAGAA GTTTCTGTCG TACGGAAACG TTTGAAGATT TCAGCGATGA    8520

TATTTCCAAG GTTTTTCTTC TTGAATGGAG GGTTGAGCTC AAGATTGCTG ATAGCTTCCT    8580

TGATATCTCC ACCAAGTGGC AAGAAGTATT TAGCTGGAAC ACCTTCTGTC AAGTTGGCAT    8640
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811

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TGTTTGGTTC TTGCAAGTAT GGTAGCCCCT CTGGCATGAT ATCGTTGAAG AGAATTTTAC      8700

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GTTCTGGTTT CAAGGTACGA TAATTGATTG TTTCAGGTTT TTTGACTTCT CCATAAGACC     10320

ATGAACGGAC TTTACTTGGA GAAGCTAGGG TGATTTGCAT ACTTTTAAAA CGATTTACAT     10380
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812

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CAACCACTAT TTCTTCCCTT TCTATTCTAA GTGAACTGCT TATTCTTGTT CAGCAGCTTC    10440

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813

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ACGACCATAG TGAGTGTAGT GCACGTCACG TACTTCATAT CCAGCACGGT CACGAGTCAA    12540

ACCACCAGGT CCTAAGGCTG ACAAACGGCG TTTGTGAGAC AACTCAGAAA GCGGGTTGTG    12600

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ACGAACCAAG GTTGTAAATG GAATCTTACG AGTACGGTCG ATACGAGTGT AGGTGATATC    13500

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GCCCACCTTA CCATTTTTGT CTACTTTGTC GTTAAAGTAA ACACCTGGTG AGCGGACCAA    13620

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TGGGAAATCA CCAAAGAAAA CTTCTTGGGT CTTGATTTCG CTTGTTTCTT TATTGATCAA    13740

ACGGAAGGTT ACAAAAATTG GTGCTGAGTA GCTAGCATCG TGGATACGAG CTTCTTCTAG    13800

CGTATATTTT GGTTCCTTGA TTTCATATCC AACAAATTCC AACTCCATTG TGTCTGTGAA    13860

GTTTGAAATT GGCAATACAT CTTCAAACAC TTCCTTAAGA CCGTGGTCTA GGAAAGCTTT    13920
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814

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GAATGAGTCA GTTTGAATTT CAATCAAATT TGGTAAGTCA AGAACTTCTT TGATTCTTGA    13980

AAAACTACGA CGGGTACGAT GTTTCCCGTA TTGAACGTCA TGTCCTGCCA AGATGATTCT    14040

CCTTTGTAAA TAAGTTCCAA GCCTTGTCAA TCAGGCTTTT CTAATCGTCA TATGGTTGTA    14100

AACCCCTTAT CACCGTGTCC TCTTGACGAA TTTTCAGAAT CTTTAAGCCT CTGTTACAAA    14160

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TTTTCCCATA GAAAACTTGG CATCACATTC GAATCACGCT ATGGTACAAA AAACTGAAAA    14400

AACTATTGAC TGAAAATCAT TTTCAAGGTA TAATAATAAA CGTTAAGGCG GTATAGCCAA    14460

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TTTCCCTCGA ATAAATACGT ATAACTTTAA AAACTTTTGG AGCGAGTTTG TGGCAGAGTT    14640

CTTTCCATGG CATAATTCCC TTTTGAAATC AG                                  14672
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(2) INFORMATION FOR SEQ ID NO: 112:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 7902 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

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AGGAGACTAT TCAAGCCCAA ATTgAGTAGC CCAGCAAAGA CTGTATAGAC TGTGATACGT         60

TTTTCATAGC CATTGGTAAA GAGAATTTGG GAACCAAGAA TGGTATCTAA GGCCAGGATA        120

ATCGTACGAA AAGCGAAGAG AGAGGTCAAG ATGCCGCCTC CGATATATTT TTCACTACCG        180

TAAAGTAGGA TGGCATTTGG TCCTAAAACC ATGAGTCCAA AACTCAGTGG AATGATAAAG        240

AAGTTAAAGA TTCGACTACC TCTATTAACC AGAGAAACAT AGGCTTCTTT GTCTCCTTTC        300

CCCAGATAGT AACTGAGACG AGGCACACTC ACTCCAATTG CACCTGTTAC AACCCCAGCT        360

ATAACGGTCA CAATTCGCTG AGCTATGGTA TAGTAACTAA CGTTGACATC AATCCCTGTT        420

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ATGGCTGTCA GAGGGAGAAA GAGTGGTTTA AAATCACTTA GGTGAATTTT AACAAGTTTG        540

ATGTCTCTTT TAATCCAAAA ATAACTAATC AGGTAGTTAA TCAGCGTCGA TAAACTCATC        600

ACAAGTGTAT AGACAACAAT ATCGTGTTCA TTTTTAACAA ATAAGAAAAT AGAGACCAGC        660
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815

ATCAGGATAC	GGATGAAGGC	AGTTTTGTAA	AAGAGAAAAC	TGTAATTTTC	CAGAGCTTCA	720
TTGACCCATT	CGATTGAAAA	AATCTGGGCA	ATGAGTTGAA	TCCCCATAAC	AAGGTAGACC	780
TTTTTGACGA	TTGGATTATC	AGTAAAGAAG	AGAGGATAGG	CTAGGATATA	GACAGCAGTG	840
GTCAAAATCG	TACAAGCGAT	GCACAAATAA	AAAAGACTAG	AAAAGGTTCT	GTTAAGATCT	900
TTTTTGTTAT	CCTTGACATT	ACTGATAGCC	CTTAAACCGT	AGTTATAGAC	ACCATAAGTT	960
GCAAAGGGCA	AGAAAAATGA	CAAAATAGTG	TCGACTGAGT	TGAAGTAACC	ATAGTCAGTT	1020
CGGTCCAAGA	CACGCGCGAC	ATAGGTTCCA	GTTAGGATGG	GAAAAATAAT	ATTCAAGACA	1080
CGAATTCCCA	TGTAAGATAG	AGCATTTAAT	TTTATACTTT	TCATTCAATT	TACCTCGTTT	1140
TTCATTATAT	CATAAAGTTA	GCTAATAAGA	AATGAAGGGC	AGTAAGTCAA	GTAATCACTT	1200
TGAAGTTTCA	AATCTTAAGT	TTTAAGTTTT	CTTTAAGGAA	AGTATATTAT	TCTGAAGGAC	1260
TCTAAAATTT	CGCAGCCATT	TATTAGTAAT	TGCTACAGAA	TTCCTAGTCA	TTACTAGAAA	1320
TGGACTAGTT	TCTTTGAATA	ATAGAACTGC	ATAATTCTCC	TATTCTAGAA	GGGGAGGACC	1380
AGTATTTCTT	TTATGATAGG	ACTAGATTGT	GGTATAATAG	AGAGAATAAG	TTTTTTTAGT	1440
AAGACAAAGG	AGAAAATAGA	TGATTTATGC	AGGAATTCTT	GCCGGTGGAA	CTGGCACACG	1500
CATGGGGATC	AGTAACTTGC	CAAAACAATT	TTTAGAGCTA	GGTGATCGAC	CTATTTTGAT	1560
TCATACAATT	GAAAAATTTG	TCTTGGAGCC	AAGTATTGAA	AAAATTGTAG	TTGGTGTTCA	1620
TGGAGACTGG	GTTTCTCATG	CAGAAGATCT	TGTAGATAAA	TATCTTCCTC	TTTATAAGGA	1680
ACGTATCATC	ATTACAAAGG	GTGGTGCTGA	CCGCAATACA	AGTATTAAGA	ACATCATTGA	1740
AGCCATTGAT	GCTTATCGTC	CGCTTACTCC	AGAGGATATC	GTTGTTACCC	ACGATTCTGT	1800
TCGTCCATTT	ATTACACTTC	GCATGATTCA	GGACAATATC	CAACTTGCCC	AAAATCATGA	1860
CGCAGTGGAC	ACAGTGGTAG	AAGCGGTTGA	TACTATCGTT	GAAAGTACCA	ATGGTCAATT	1920
TATTACAGAT	ATTCCAAATC	GTGCTCACCT	TTATCAAGGA	CAAACACCTC	AAACATTCCG	1980
TTGCAAGGAC	TTCATGGACC	TTTATGGATC	TCTTTCTGAT	GAAGAGAAGG	AAATCTTGAC	2040
AGATGCATGT	AAAATCTTTG	TGATCAAAGG	AAAAGATGTG	GCTTTGGCCA	AACGTGAATA	2100
CTCAAATCTG	AAGATTACAA	CCGTAACAGA	TTTGAAGATT	GCAAAAAGTA	TGATTGAGAA	2160
AGACTAGTAA	AATGATTAAT	CAAATTTATC	AACTAACTAA	GCCTAAGTTT	ATCAATGTCA	2220
AATATCAGGA	AGAGGCTATT	GACCAAGAGA	ATCATATCCT	TATCCGTCCC	AACTACATGG	2280
CTGTCTGTCA	TGCGGATCAG	CGTTACTATC	AGGGAAAACG	TGATCCCAAG	ATTTTGAATA	2340
AAAAGCTTCC	AATGGCAATG	ATTCACGAGT	CATGTGGAAC	CGTCATTTCT	GACCCGACCG	2400

816

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GAACCTACGA GGTTGGTCAA AAAGTTGTCA TGATTCCCAA TCAGTCTCCT ATGCAGAGTG    2460

ATGAAGAATT CTATGAAAAC TACATGACAG GGACCCATTT CTTGTCTAGT GGATTTGATG    2520

GCTTTATGAG AGAGTTTGTT TCTCTCCCTA AAGATCGTGT GGTGGCTTAT GATGCTATTG    2580

AAGATACGGT TGCAGCCATT ACAGAGTTTG TCAGTGTGGG CATGCACGCT ATGAATCGTC    2640

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TGGAGTCTAT GGACTGTCTA TAAGGAAGAG CAAGGTGAAG ATTTTGGTGA CTATGGTGTG    4020

AATCGTTACC AAAGAGCTAT TAAAGGTTTG GCTTCTTATG GAGGTTCAGA TGAAAAGTAA    4080

AAACGGAGTT CCTTTTGGCC TTCTCTCAGG TATTTTCTGG GGCTTGGGTC TAACGGTTAG    4140

TGCTTATATC TTTTCGATTT TTACAGATTT GTCACCCTTT GTGGTGGCTG CAACTCATGA    4200
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817

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TTTTTTGAGC ATCTTTATCT TACTAGCTTT TCTCTTGGTA AAAGAAGGGA AAGTTCGCCT     4260

CTCAATTTTC TTAAATATTC GCAATGTCAG TGTTATCATC GGAGCCTTGC TAGCAGGCCC     4320

TATCGGTATG CAGGCCAATC TTTATGCAGT TAAGTATATC GGAAGTTCTT TAGCTTCATC     4380

TGTATCGGCT ATTTACCCTG CGATTTCAGT TCTATTGGCT TTCTTCTTTT TGAAGCACAA     4440

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AATACGGTGA AAATGTTGAT CAGGAGCTTT TGTTGGGTGA TATTGCAGAT ATCTCAGGTT     5880

GCCGTAATCC AGCCGTTTTT ATGGAACGTT ATTTTCAGAT AGACGATGCG CATTTGTCGA     5940
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818

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AATTAATTTA TAGAAATATT TTAGCAGCCA AGGTGTACTG TTATAGATTC AATTACACTA   7020

TAATTTAGTG TAATTGAGAA AGGAGAAATG ATTGTGATTG ATGTTGGCTA GGTTATGTTC   7080

AATGATTCCT ACCGTCTCAA ATCTTGTCAG TAAGGAAAAA TAAATTCTTC AAAAGTAGAG   7140

ATTACAAGGC TTGTTTAAGA AAGAATTCAA AGACCTTGAC AAATAAAAAT AAAATGGTTA   7200

TTATAAAAAA TGGTCTGAAA TAGATGATGA TACTTTTCGA AAATCTCTTC AAATACGTCA   7260

GCTCAGCTTT GCCTTGCTGT GTTTTGAGCA AGCTACGGTT AGCTTCCGAG TTTGATTT:C   7320

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AAAATGATAA AAAGAGCTCG TGAGATTGGC ATATCAGACT ACTAAAGTAT TGAGTTTGTT   7440

AGGATTTTAG CGACTAGTTA GCTGGGAAAG GAAGATATTT GTGACAAATA ATAAACTGTA   7500

TTCGTTGATA GAATTTAGAA ATAAAATATA TGAAGAATTA GAACTTTCCA GAAGTGATTT   7560

AGCGATTTTA CTATGTGCCA TGCTTATCGC CTCTATCGGA TTAAATATGG ATTCGACTCC   7620

CGTGATTATT GGAGCCATGT TAATCTCTCC TTTGATGACA CCTATTCTGG GAGTGGGGCT   7680

CTCTCTAGCT ATATTTGATT TTAAATTGTT AAGAAAATCT TTTAAAATAT TAGCTATTCA   7740
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819

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AATTCTTGCC AGTCTAATAG CTTCAACACT TTATTTTTAT CTTTCTCCCA TTTCGTATGC        7800

TAGTTCGGAG ATTGTTGCTA GAACCTCTCC GACTATTTGG GATGTTCTCA TTGCTTTTGT        7860

AGGAGGGATA GCAGGTATCA TTGGTGCTAG GAAAAAAGAG AC                           7902
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(2) INFORMATION FOR SEQ ID NO: 113:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 18627 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

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GAAGTTGAAA TGGCCAGCTG ATGAGCAATA TCGGTCATAG AAATCTTCTC AATCAACTTT         60

TGCGCAATTT TTTGGTTGAT AATACGAGGA ATTTGGTGAT TTTTCTTGAC GATAGAAGTT        120

TCAGCGACCA TCATTTTTGA ACAGTGATAG CACTTGAAAC GACGCTTTCT AAGTAGAATT        180

CTAGTAGGCA TACCAGTTGT CTCAAGGTAA GGAATCTTAG ACGGTTTTTG AAAGTCATAT        240

TTCTTCAATT GGTTTCCGCA CTCAGGGCAA GATGGGGCGT CGTAGTCCAG TTTGGCGATG        300

ATTTCCTTGT GTGTATCTTT ATTGATGATG TCTAAAATCT GGATATTAGG GTCTTTAATG        360

TCTAGTAATT TTGTGATAAA ATGTAATTGT TCCATATGAA TCTTTCTAAT GAGTTGTTTG        420

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GAAAAACAAT CACGTTATCA AATGTTAAAT GAAGAATTGT CCTTCCTATT GGAAGGCGAA        660

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CTGGATCTGG ATTCTTCAGA GATTGAGGAT TACGATGCTA TGGATCGAGA TTATTTGGAA       1020

CAATTTGTCG CTATTTTGCT TGAAAAGACA GCATGGGACT TTACGATGTT TGAGGAAAAA       1080

TCTTAATGTA TCAAGCACTT TATCGAAAAT ATAGAAGTCA AAACTTCTCC CAGTTAGTTG       1140

GTCAAGAAGT TGTGGCTAAG ACTCTTAAAC AAGCGGTGGA GCAAGAGAAA ATAAGTCACG       1200
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820

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GGGTAGATGA AATTCGCGAA ATTCGTGATA AATCTACCTA TGCGCCTAGC CTTGCTCGTT      1440

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CACAGGATAT TAAGGAACAT ATTCACTATA TCTTAGAAAA AGAAAATATC AGTTCTGAAC      1680

CAGAGGCTGT GGAAATCATT GCCAGACGGG CGGAAGGTGG AATGCGGGAC GCCTTGTCTA      1740

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821

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822

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GATGCTGAGC AAATCAGTCT CAACAATCCG ACTTGTGGGG ATGTCATCAA CCTCTCTGTC    6540
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823

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824

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825

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826

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CTGATATGGA GGAGGGAGCT GTGAAAAGAG CTATTTTGGA GAATGCCAAG CAGACCTACG   12900

TCTTGGTGGA TTCGTCAAAA ATTGGACAAA CTTGCTTTGC CAAGGTAGCC CCACTCAAAC   12960

GCGCTATCGT TATCACTAGT CAAGGGCATG AGCTCTTGCA GGTTATTAAG GAGAAAACGG   13020

AGGTAATAGA AGTATGATTT ATACAGTCAC ACTCAATCCA TCCATTGACT ATATCGTTCG   13080

TTTGGACCAA GTCAAAGTTG GTAGTGTCAA TCGTATGGAC AGTGATGATA AGTTTGCTGG   13140

TGGGAAAGGA ATCAATGTCA GCCGTGTCTT GAAACGTTTG AATATACCAA ATACAGCGAC   13200

GGGATTTATC GGTGGCTTTA CTGGTAAATT TATCACAGAT ACTTTAGCAG AGGAAGAAAT   13260

CGAGACACGT TTTGTCCAGG TGGCAGAAGA TACTCGTATC AATGTTAAAA TCAAAGCAGA   13320

CCAAGAAACA GAAATCAACG GAACGGGTCC AACTGTTGAA TCGGTTCAGC TAGAAGAATT   13380

GAAAGCTATT TTATCTAGTC TGACAGCAGA AGATACAGTT GTCTTTGCAG GTTCAAGTGC   13440

TAAAAATCTA GGCAATGTTA TCTATAAGGA TTTGATTTCC TTGACGCGCC AGACTGGTGC   13500

GCAAGTGGTC TGTGACTTTG AAGGACAGAC CTTAATTGAT AGTTTGGACT ACCAGCCTCT   13560

TCTTGTAAAA CCAAACAATC ATGAACTTGG AGCGATTTTT GGGGTTAAAC TCGAAAGTTT   13620
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827

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AGATGAAATT GAGAAATACG CTCGTGAGTT ACTGGCTAAG GGTGCTCAAA ATGTTATTAT    13680

CTCTATGGCT GGTGATGGTG CCCTTCTTGT CACATCTGAG GGAGCTTACT TCGCTAAACC    13740

AATCAAAGGA ACAGTCAAAA ATTCAGTTGG AGCTGGTGAT TCTATGGTTG CTGGATTCAC    13800

AGGTGAATTT GTCAAATCAA AAGACGTAGT AGAAGCCTTC AAATGGGGAG TGGCTTGCGG    13860

AACGGCAACT ACCTTCTCAG ATGACTTGGC AACGGCGGAA TTTATTAAAG AAACATATGG    13920

AAAAGTTGAG GTAGAAAAAC GATGAAAATT CAAGACCTAT TGAGAAAAGA TGTCATGTTG    13980

CTAGATTTGC AGGCAACTGA AAAAACAGCT GTCATCGACG AGATGATTAA AAATTTGACA    14040

GACCACGGTT ATGTAACAGA TTTTGAAACA TTTAAAGAAG GAATTTTGGC GCGTGAAGCT    14100

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TTGGCAGCCT TGGCAGAATT GTCTCAATAC TTGATGAAAG ACGGTTTTGC AGACAAACTT    14340

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GAGGAACTTG TTCAAGCACC TGCTAATGAC TCTGGTGACT TTATCGTAGC TGTTACAGCT    14460

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CCTCGTTCAC TCGAAGGTGC TAAATCAATC CTTCTATTGC CACTTCTTGG AACAATCTTG    15300

ACAGGATTTG TTATGCTAGC TGTGAATATC CCAATGGCTG CAATCAACAC TGCTATGAAT    15360
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828

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GACTTCCTAG GCGGTCTTGG AGGAGGTTCA GCTGTCCTTC TTGGTATCGT CCTTGGTGGA    15420

ATGATGGCTG TTGACATGGG TGGACCAGTT AATAAAGCAG CTTATGTCTT TGGTACAGGT    15480

ACGCTTGCAG CAACTGTTTC TTCAGGTGGT TCTGTAGCCA TGGCAGCAGT TATGGCTGGA    15540

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AATTCGCTTG CTAGTGGGTA GCCTAGCTTA TCTGGCGATA TTCGGCCTAT TAATCTATCT    16200

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GTCTAAAGAG AAGAAAATTG TCAGAGAAAA TATCAAAATC TTAGAAGCAA CCTTTGCTAG    16980

CTTTGGTATT AAGGTAACAG TTGAACGGGC CGAAATTGGG CCATCAGTGA CCAAGTATGA    17040

AGTCAAGCCG GCTGTTGGTG TAAGGGTCAA CCGCATTTCC AATCTATCAG ATGACCTCGC    17100

TCTAGCCTTG GCTGCCAAAG ATGTCCGGAT TGAAGCACCA ATCCCTGGGA AATCCCTAAT    17160
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829

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CGGAATTGAA GTGCCCAACT CCGATATTGC CACTGTATCT TTCCGAGAAC TATGGGAACA    17220

ATCGCAAACG AAAGCAGAAA ATTTCTTGGA AATTCCTTTA GGGAAGGCTG TTAATGGAAC    17280

CGCAAGAGCT TTTGACCTTT CTAAAATGCC CCACTTGCTA GTTGCAGGTT CAACGGGTTC    17340

AGGGAAGTCA GTAGCAGTTA ACGGCATTAT TGCTAGCATT CTCATGAAGG CGAGACCAGA    17400

TCAAGTTAAA TTTATGATGG TCGATCCCAA GATGGTTGAG TTATCTGTTT ACAATGATAT.   17460

TCCCCACCTC TTGATTCCAG TCGTGACCAA TCCACGCAAA GCCAGCAAGG CTCTGCAAAA    17520

GGTTGTGGAT GAAATGGAAA ACCGTTATGA ACTCTTTGCC AAGGTGGGAG TTCGGAATAT    17580

TGCAGGTTTT AATGCCAAGG TAGAAGAGTT CAATTCCCAG TCTGAGTACA AGCAAATTCC    17640

GCTACCATTC ATTGTCGTGA TTGTGGATGA GTTGGCTGAC CTCATGATGG TGGCCAGCAA    17700

GGAAGTGGAA GATGCTATCA TCCGTCTTGG GCAGAAGGCG CGTGCTGCAG GTATCCACAT    17760

GATTCTTGCA ACTCAGCGTC CATCTGTTGA TGTCATCTCT GGTTTGATTA AGGCCAATGT    17820

TCCATCTCGT GTAGCATTTG CGGTTTCATC AGGAACAGAC TCCCGTACGA TTTTGGATGA    17880

AAATGGAGCA GAAAAACTTC TTGGTCGAGG AGACATGCTC TTTAAACCGA TTGATGAAAA    17940

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TAAGTCTTTG GTTATCGAAA CACAGAAAGC CAGTGCGTCT ATGATTCAGC GTCGTTTATC    18180

AGTTGGATTT AACCGTGCGA CCCGTCTCAT GGAAGAACTG GAGATAGCAG GTGTCATCGG    18240

TCCAGCTGAA GGTACCAAAC CTCGAAAAGT GTTACAACAA TAAAAAAATA GCTTCTTTCC    18300

AAGTTTGGAG GGAAGCTATT TTAGTGGCTA TTGATTGCTT TTATTTTCTG AAGTTGGCGC    18360

ATTGGACTGT TTTTCGTTTT CAGTAGCAGG TTTACTTGAA GCAGGAGTAG AAGAGTCCTG    18420

AGTTGCTGTT TTCTGATCTT CTTTTTTCTC TTCCTTGACG CTAGATTTTG GTGTTTCCTC    18480

TTGCTGTGTT TTTTCTTGAC TAGTGTTAGT CTCTTTAGTT GGACTGGTGT TTTCCTTAGG    18540

GGATTCCTTT TGGATTTCTT TGACAATGGT TGTCGTCTGG CTTGTCGTAG GTTCTTTTTT    18600

AATATTTTTG TTATTATCCA AGGCGTT                                        18627
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(2) INFORMATION FOR SEQ ID NO: 114:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2560 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

830

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

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TAAAATACGT TACCTTGCTT CTGCACGTTC AGCAGGTAAG TCATTGAAAT TTAAAGATCA          60

AGATATTACA ATTGAAGAAA CGACTGAAAC AGCTTTTGAA GGAGTTGATA TTGCTCTCTT         120

TTCAGCAGGT AGTTCTACAT CAGCTAAGTA TGCACCATAC GCAGTAAAAG CTGGCGTGGT         180

AGTAGTAGAT AATACATCTT ATTTCCGTCA AAATCCAGAT GTTCCTTTGG TTGTTCCAGA         240

GGTCAATGCT CATGCACTTG ATGCTCACAA CGGAATCATT GCCTGCCCTA ATTGTTCAAC         300

AATTCAAATG ATGGTGGCTC TTGAGCCGGT TCGCCAAAAA TGGGGCTTGG ACCGTATCAT         360

TGTTTCAACT TATCAAGCCG TTTCAGGTGC TGGTATGGGA GCAATTCTTG AGACACAACG         420

TGAACTTCGT GAAGTCTTGA ATGATGGTGT GAAACCACGT GATTTGCATG CGGAAATCTT         480

GCCTTCAGGT GGTGACAAGA AACATTATCC TATCGCCTTT AACGCTCTTC CACAAATTGA         540

TGTTTTCACT GATAATGATT CACGTACGA AGAGATGAAG ATGACCAAGG AAACTAAGAA         600

AATTATGGAA GATGATAGCA TTGCAGTATC TGCAACATGT GTGCGTATTC CAGTCTTGTC         660

AGCTCACTCT GAGTCTGTTT ATATCGAAAC AAAAGAAGTG GCTCCAATCG AAGAAGTAAA         720

AGCAGCTATC GCAGCCTTCC CAGGTGCTGT TCTTGAAGAT GATGTAGCTC ATCAAATCTA         780

TCCTCAAGCT ATCAATGCAG TTGGTTCGCG TGATACCTTT GTTGGTCGTA TCCGTAAAGA         840

CTTGGATGCA GAAAAAGGAA TTCACATGTG GGTTGTTTCA GATAACCTTC TCAAAGGTGC         900

TGCTTGGAAC TCAGTTCAGA TTGCTGAAAC TCTTCATGAA CGTGGATTGG TTCGTCCAAC         960

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CTTTGAAATA GAGAGGTGTT TTCGTGTCTT ATCAAGATTT AAAAAAATGT AAAATCATTA        1080

CAGCCTTTAT TACCCCCTTC CATGAGGATG GTTCCATTAA CTTTGATGCT ATTCCAGCCT        1140

TGATTGAGCA TTTATTGGCC CATCATACGG ATGGAATTCT TCTCGCAGGA ACGACTGCTG        1200

AGAGTCCAAC TTTGACCCAC GATGAGGAGT TGGAGTTGTT TGCGGCTGTA CAAAAGGTN;        1260

TCAATGGACG CGTTCCTTTG ATTGCGGGTG TAGGTACTAA TGATACGCGT GACTCTATTG        1320

AGTTTGTCAA AGAAGTAGCG GAATTTGGTG GTTTCGCAGC TGGGCTTGCT ATTGTTCCTT        1380

ACTACAACAA ACCTTCTCAA GAAGGGATGT ATCAGCACTT TAAGACTATT GCAGATGCTT        1440

CTGACCTACC AATTATTATC TATAACATTC CAGGGCGTGT AGTTGTCGAA TTGACTCCAG        1500

AAACCATGCT TCGCTTGGCT GACCATCCAA ATATTATCGG TGTCAAAGAA TGTACTAGCT        1560

TGGCTAATAT GGCTTACTTG ATTGAGCACA AGCCTGAAGA GTTCTTGATT TATACAGGTG        1620

AGGATGGAGA TGCTTTCCAT GCCATGAACC TTGGGGCGGA TGGGGTTATT TCTGTTGCCT        1680
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831

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CTCATACAAA TGGGGATGAA ATGCACGAGA TGTTTACTGC GATTGCAGAA AGCGATATGA    1740

AGAAAGCCGC AGCAATTCAG CGTAAATTCA TTCCTAAGGT TAATGCTCTC TTCTCTTATC    1800

CAAGTCCTGC TCCAGTTAAG GCAATTCTTA ACTATATGGG ATTTGAAGCT GGACCCACTC    1860

GTCTACCTCT TGTTCCAGCA CCAGAAGAAG ATGCCAAACG CATTATCAAG GTTGTCGTAG    1920

ATGGCGACTA CGAAGCAACT AAGGCAACTG TAACAGGGGT CTTAAGACCA GATTACTAAT    1980

AAAGACAATA AAATCCGGCT CTTTGTCAAC TGTAGTGGGT TGAAGTCAGC TAAGCTCGAG    2040

AAAGGACAAA TTTTGTCCTT TCTTTTTTGA TATTCAGAGC GATAAAAATC CGTTTTTTGA    2100

AGTTTTCAAA GTTCCGAAAA CCAAAGGCAT TGCGCTTGAT AAGTTTGATG AGATTATTGG    2160

TCGCTTCCAA TTTGGCGTTT GAATAGGGTA GTTGAAGGGT GTTGACGATT TTCTTTTTGT    2220

CCTTTAGAAA GGTTTTAAAG ACAGTCTGAA AAATAGGATG AACCTGCTTC AGATTGTCCT    2280

CAATGAGTCC GAAAAATTTC TCCGGTTCCT TATTCTGAAA GTGAAACAGC AAGAGTTGAT    2340

AGAGCTGATA GTGATGTTTC AAGTTTTGTG AATAGCTCAA AAGCTTGTTT AAAATCTCTT    2400

TATTGGTTAA GTGCATACGA AAAGTAGGAC GATAAAATCG CTTATCACTC AGTTTACGGC    2460

TATCCTGTTG AATGAGTTTC CAGTAGCGCT TGATAGCCTT GTATTCGGGA TTTTCGATGA    2520

AACTGATTCA TGATTGGAC ACGCACACGA CTCATAGCAC                           2560
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(2) INFORMATION FOR SEQ ID NO: 115:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11303 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

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TATTGGATTT CCCTTGCAAT CAGTTTATGG GACAAGCACC CGGCAGCGCA GAGGAAATCA    60

ACGCCTTCTG TAGCCTACAT TTTCAAACCA CCTTCCCACG TTTTGCCAAG ATTAAGGTCA    120

ACGGTAAGGA AGCAGACCCT CTCTATGTCT GGTTACAAGA CCAGAAATCC GGCCCACTAG    180

GAAAACGAGT CGAATGGAAT TTCGCTAAGT TTCTCATCGG TCGAGATGGG CAAGTCTTTG    240

AACGCTTTTC TTCAAAAACA GACCCAAAAC AAATTGAAGA GGCGATACAA ACTCTACTAT    300

AATTCACAAT CTCACTATGA TTAGGTTTCC TTTAACCTGA TGAATAGTGA GATTTTTTGA    360

TGGGCTTTGA CTTAAATAGA AAAACACCCC ATGATATGAA ACATGAAGTG TTGTAAAGTC    420

TATGTTGTAG GTGCTTATTT CACAATTTCA ATGTGACCAG TGATAACGAA TACCATACAG    480
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832

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AATCTTCATA TACACTAAAC AAATGACTTT CTAATTATTT CAATTAGTTT TGGCTAGTAA    540

ATATCATTTC CAACAAACGC CCTCTCAATT CCTTATCCTG ATGATGCAAG ATATTCATTA    600

AGTCATGAGA GTTTTTCGCA TTGATGAATT GATTTAACAA TCTATCTTTT AATTCATATG    660

GAAGAGAAGC TGTCTTTAGT AGTCTAAAAA CTTCGTCATT TAAAGATGTC CTTTTATTAT    720

CTTTCCATTC AAATTTAGCT GTATCATTCT TATTTGGCAA TTCAATTATA GACACATTCG    780

TTCCTTTAAA ATGAATTCTA TGTTTTCTAT TGCTTGGAAC GATACTAGAA TCTCCTTGTA    840

ATGCTAACTC TACCATTCCC ATTTCCCAAT CGATTGATAA TCTTGTTTTA TATCTTTGAC    900

CATTTTGATC TTCAAGCATT TCAAAGAAT GTTGTTTTCC TGGGAATACA TACCAATCTA    960

CAACTTCAGG TAAATCAACA CCCATACCTA TCTCAGAACC AACCAAGGGA ATGATTGCAC    1020

CACTTTTTGC AAACACAGGC GTAGTCGAGA TGTCCCTATA AACACTTAAC TTCACACCAC    1080

CTGTGTATTT TTTCTCTGAA AAGAAGTCAT ACCATTCACC TTCAGGGAAC CATACATCTA    1140

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TTCCAAAAAA GTATTGGTTT GGAACATTAT AGCTCTCATC ATTCTCTGGA TAGAAATAAT    1260

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AGGGAATCAT CTGATGTCTC AAACGAAGGT ATTTCTTCAT AATCTTAGAT GTTGTTTCTG    1380

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TATGTCCACC GATATCATGA CTCCACCAAC TATAACCGAT ATTAGATGCT GTCGCTGTAA    1560

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GCCAATATCT ACTCCACCAA TTGCCTAAAG CATATCTTGG CAACAAGGGT GTTGAACCAG    2220

TCAAATGGTA AAAATCTCTG ATTGCTCCTC TATAATCATG CCCATAGGCA AAGAAATACA    2280
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833

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GGTCAATTTG ATTTTCTCTC TCAATATAAC CAGATTGTTC ATCCCAAATA AATCCTTGAG    2340

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ACCAGCGACT ACCATATACG GCAAAATTTC CTTTTAATTC TATAAATAAA TTTTCGGCGT    2520

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TAAATAGTAG CAGTAACCAT TGGTGCTAAA ATAAATGGTA TAGCCAAGGC TGGATTATAG    3960

ATAATAGGTA ATCCAAAAAT TAATGGTTCA TTAATATTAA ATAAGGCTGG AACTACAGAT    4020
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834

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GCTCGTCCTA TTGCTTTAAG CTGTTCAGAT TTAGAGGCAA AAGCAATATA TAAACATAGT     4080

CCTAAAGTTG CACCAGAACC ACCTGCAATT ACAAACATAT TAGAAAATTC ACCTGCAACA     4140

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GCAAAAACAA TGTTCGCACC GTGGATACCT ACAATCCAAA GTAGTTGAGT CAATAGATAA     4260

ATAATCATTA AACCAATCCA CGAATTAGTC AGATTGGATA CARRACCAAA TGGAATTGCA     4320

ATGACTTTAA AAATATCTGT TCCCATTGCT ACAAGAAGAC CGTTGATAAA GATAACAACA     4380

AATGCAACAA CAAATCCCGG AACCAAAGCG GTAAATCCAC GAGAAACTCC TTCTGGAACA     4440

GCTTCAGGCA TTTTAATAAC CCAATTATGT TTAACACACA TACGATAAAT AAGAACAGTC     4500

ACAATTGCCA TAATGATTGC GGTAAAAATC CCTGTTGTCC CAAAACGTGC GACTACATTT     4560

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ATTCCACCAT CAAAAATGAT TTGCGGTACT GTCATGACAA AAGCCATCAA GGCAAGCAAG     4680

GCACCATTAA GAGGATTCAT ATTGAGTTCT TCTTCCTCTG CATAAATTTT TGTCAATTCA     4740

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AATTATACTA GATCAGGATT ATAAACTAAG TGAGTTCTTT TCCAATTGGA CAAATTGTTG     5160

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AAGCATTTGT ATTCTAACAA ACATTAGTGT TATTCCCAAC TTTTCTTTCC TATTTCCATA     5400

AAGTTTAAAT TGTTCAACAG TTGCTAAAAT AGAAAATACT ATGAGCATAA TGGGGAAAAT     5460

AATAATAGGC GAGGGACTAA TAAACTGACT CAAAAGCCAA TAAATATTCC CAAAAAAGAA     5520

GAGTGCTATT GAATAACGTA GAAGAAGATA TCGATTGAAA AAAGTATTAG TTAGAGCCAT     5580

CTCTCGACGT TGTTGTTCAA TCTTTTGTCG TTCTTTTTTA TCCATATCAT TTCCTCCTTA     5640

TATAACAACA CATATTTAGT TAACTTTCTT ATAAAGAGCT AACATTTCCT TTGCTACTTC     5700

TAATAATGTC ATAGTGGTCA TTAAATGATC TTGAGCATGT ACCATGATAA TTTCAATTTT     5760

AATTTCCACT CCACTTGCGT ATTCTTGCAA GAGTTTGGTT TGTGCATGAT GCGCTTCAAG     5820
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835

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AATTATCTCA TTTGATTGAT TTAATTTACT TTCTGCATCA TCAAAACTAC CTTCTCTCAT    5880

TTTTGCAAAT GCTTCATGTA TTTCTGACCT TGCATTTCCC GAATGCAGGA TAATTTCAAA    5940

TGCTGCAACC TGCAGTTCCT CTTGATTCAT ATAAACCTCC TATTTTATCT TCTCAAATAT    6000

GTTAATAAAA TCTTCAAAGT TATTGCAAGA TATTAGCTGA TTTTGCAATT CATCATTCTC    6060

TGTCAGAGAG ACTATCTTTT TAGTCACAGT TGCCAAACCT TCGTTCCCAT ATATTGATGG    6120

AGATAGAAGA AATACTAGCT GGACATGTGA ACTTTGATTA TCCCAGAGTA ACGAATCTTT    6180

ACAAATTGCA ACCGAAACCT TTCCCTCTGT ACCAAAGGGC TGAATAGGAT GCGGAACTGC    6240

AATTTTTTCA GAAAAAACAA CTGAACTTAA TTCTTCGCGC TGTTTAATTC CATAAAGTAA    6300

AGATTGTTCA AACTCATTTG ATTCACCAAC AGATAAACTC TCAACCATCT TTTCAAGTAA    6360

ATTTACCTTG TCTGATTCAG TACATATTAA AAAGTTTTCT TTACTAAAAT ACTGTCTAAA    6420

GCCGTTGTTT TCAAATTTGT TAATCTTTGA TGATTGTACA TAACTAGAAA CTTGCATCTA    6480

ATCCATAGCT TTTCTAATCA TTTCCATCTC ATCACTCTTA AGAAACACAC TAACTTTAAA    6540

AACTGGGATT TGAAAATATA GATTTGATAA ATCAATAGCT GACACTATAA AATCTATTCC    6600

TTTAAGTTTT TCTTGATTCA ATTCATAGTA GCCTATTACA TCAACAACTT CTACTCGCTT    6660

CCCAAACTCC GTTTCCAAAC GATTTCTTAA CATTTGGGCT GCACCAAATC CTGTTGCACA    6720

AATAGCAAGA ATATTAAACT TAGTACTCTC TTTGCTACGT TCCATAGCAG CTAAAAAGTG    6780

AAGACTTACA TATGCTACTT CATCATCTGA TATTGTCCAC TCCAAGAACT TGTCCATATT    6840

TGCAAGAATT TCTCTAGTCA TAAAGAATAT ATCACTATAA TTCTGTTTAA TTTCATCTAC    6900

CAAAGGGTTA TTTAAGGTAA TCCGGCTTTC TAAACGTACT TGTAGTGTCA TTAGATGAGT    6960

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ATTCTGAAAT GTTTTAAATA AAGATTTTTT TAAAACTTCT TCAGAAATAT TCTTCTGATT    7080

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TGGAAATTCC TGATTTGTTA CTTCTCTTAC TTTAGAAAGA ATTCTTTGGG CAACCTTTCT    7200

CTCTATTGCA TCATCAGTCA TCTGACAGTC TATATTTTTT ATTTCAAATC CGGATTTTAA    7260

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TAGGTTGGCC TCTTGGCATT CATCCAAAAC AATTCTAGCA AATTCTTCTA ATGGAACAGT    7380

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GAAATAATTT ATGATAAAAC GTCGTTTATC ACGTTCCTCG CCTGAGACAT AAACTCCTTT    7500

ATTCGCCCTA CTCTCAATGG ACAAATTATA CTCTGATAAC ATCACTCGTA TCTTTCTGAA    7560
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836

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ATCATGAGAT AATGTTGAAC GACTAACGTA AAGTTCATCA GCTAAATCAT CAAAAAGAAC    7620

TGGAACTTGC TCAAATAATA ATTTATTTAA GATAAATACT AAACGATCAT CACCTTTTGA    7680

AACCGCAGTT TTCGTATAGT CTTCTTCCAG TTCATAAGTT TGTCTAAACT CCTGGTAAGC    7740

GCCTTGATTC TCAAAAAATA TTTGATACCC TTGACCTTGT TTTGAAATCA ACCGGACTCC    7800

TTGAATAATC ATTGTCTTCT CAATTAATTT CAGTACATTA CGGACAGTTC TATCTGAACA    7860

GGATAAATAT TCTGCCAGTT CTTTGCTTGT AACAAAACGT TCCTTATTTT TTATTAAAAA    7920

TTGAAGGATA TCTTTCTCTT TAATGTTTAA CACATTCATT CCCTCCTAAA ACGTATGTTT    7980

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CTTAACCTAA ATATTTATTG ACATTTCATG TGTTCATCAA ATATTCTCAA GAATCAAATT    8100

AGCCATTTTT TCAATTCCCA TTGGAATAGG AATATAGGCT TGAGGAGGTA TTTGTACAAC    8160

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ACTGACAAGA TACAAATCAA AAGCTGCTGC TGCGATAGCT TTCCCTCCTT CAGTAGCACT    8280

AATAGCATCA ACTACAATAT CTTTCCCTTT TCCTTTTAGA AACTCTGTTG TTTTCTGTGC    8340

CATAAGTGAT GAAGACATTC CTGCTGCACA AATAATTAAA GCTTTTGCCA TAATATTTTC    8400

TCCTTTTCTT AAATCCAATC AAAGCTGTGC TAAGTTGGCT TATTTGTTAT CTATTTTTAT    8460

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TGCTAAAATC AAAGGCAAGT CTCCTATACG AATACCATGA GCAAGCCACA ATGCAATACC    8640

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ACGAAAAACT TGTGGTAAAA ATGCAAATGT TGTTAAAATT GCTGCAATAC TTCCAATCAT    8760

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TGATTCACCG TTAGATGAAA TAACTTCCTT ATACCAGCCA AAAGATTTTT TCGGGGAACG    8880

ATTATAACTT CCCTTCCCAT TATCATCTTT ATCTACATAA ATAAAGCCAT AACGTTTCCG    8940

CATTTCACCG GTACCAGCTG AAACCAAATC AATACATCCC CATGGAGTAT AACCCATTAA    9000

ATCAACACCA TCTTCAACTA CAGCCTTTTT CATTTCACGA ATATGGGCAC CTAGATATTC    9060

AATTCTATAA TCATCATGTA CCATACCATC TGCTGCAACT TGATCTATAG CTCCAAAACC    9120

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CAAACCTTCT GGATCAATTT GCCACTCCCA TTCAGAAGCC TTAACATAAT TATTTTTCAC    9240

TAAATCTTCT GTTTCAAGAT AATCAAAATA AGGATTATTT TCACGATGAG AGTCGATAGC    9300

AAAGGACATA TAGTAACTGA AACCAATGTA ATCTACAGTC CCACCAAGTA AATCTTCTTT    9360
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837

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ATCCTGGGCA GTAAAATCAA CTGAAATACC TTTTCGTTCC CAATACTTGA AAATATGCTC     9420

AGGATATTTA CCTAAAACAT GCACATCAGC AAAATAATAA CGCTTCTGCA TAGCTTTCAT     9480

TGCCATTAAG ATATCCTTAG GATTGCAAGT AACTGGATAA ATTGGACACA TCGCAATCAT     9540

ACAACCTATT TGAAAATCTG GATTAATCTC ATGACCAATT TTTACAGCTC GTGCAGAAGC     9600

AACTAATTCG TAATGTGCTG CTTGATACAT AATTGCTTCT CTATTATCAC CTTCCTCATA     9660

TACAATACCT GAGTTAGTAA ATGGTGCAAA ATCTTCCTGA TAATTCGCTT GATTATTGAT     9720

TTCATTGAAA GTCATCCAAT ATTTAACCTT ATCTTTGTAA CGTTTAAATA CGACTTCTGC     9780

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GTGATAAGGC ATTTCAAAAT GAGATAGAGT GATGACAGGT TCAATACCAT TCTTTAAGCA     9900

TTCATCAAAA AGATTATCAT AAAACTGTAA TCCTTCTTCA TTCGGCTCTA ACTCATCACC     9960

TTTTGGAAAG ATACGTGTCC ATGCAATAGA GGTACGGAAG CACTTGAATC CCATTTCAGC     10020

AAAAAGTGCT ATATCTTCTT TATAACGGTG ATAAAAATCT ATCGCCTCAT GATTTGGATA     10080

ATATTTACCC TCTAAAACTC CCAAAGTAAT TTCACGAGCT ACTCCATGAC GACCAGCAGT     10140

CATAACATCA GCAACACTAA TTCCCTTGCC ACCTTCTTGC CATCCACCTT CAAGTTGATG     10200

AGCAGCAACA GCACCACCCC ATAAAAATCC ATCTTTAAAA GTAGTCATCT TTTTTCCTCC     10260

TGACTTTGAT ACTCTTATTA TAAACCTTAA ACCAAAAGAT GAAAACGCAT TCTTTTTCCT     10320

TATTGTTAAG GAAAGAAGTA ATTTTTAATG GAAATAGAAC AATATCTTCT TGTATTCTCG     10380

TAATGATATC TTTACGATTT TCAATACTTT CAAACTACAA AAACTCTCAC AATAATTCTA     10440

ATTCCCTGTG TCTATAAACG ACTTATCGCT TTCTGGCATC CCAGAATCAT CTTCTATATA     10500

ACGTTCAACT TGCATCTGCA AGTGATATTT TTTTCTTAAA TCTAAGATTT TCTGCATTGT     10560

CTTTGATTGA TAATGTTTAT CTAAAGTTTC TTGATTTATC CACTGATCAA TAAGGAGAAT     10620

AGTTCCCTCT TTTTCAATTG GTAAAAAATA TTCGTATTTC AAGTTACCTT TTTGATTTCT     10680

AATTTCTTTA ACAAGGCCAC TATCAAGCAT TTCTCTTGCA AACTTTATTG CACTATCTCC     10740

ATCACCTTTA TAATATACAT GAATAGTCAA TGTCATCTTA TATCCTCCAA AATCATCCTT     10800

CAATTTTAAA AAAACAAGTT TAGATGAGGA TCTAAACTTG TTTTTTATGA ACTAATTATC     10860

TAACGTTTCG CCATTACTTT CAATCACTTC TTTATACCAA TAAAATGATT TTTTCTTATA     10920

GCGATTTATA GTCAATTGAA ACAAGAGCAG GACAAAAGAG CCTCATAAAA GGTATTGCAA     10980

CTTGGTAATA CCTTTTTGAG GTGCTTTTTG ATATGAGCCC ATGTTTTCTC AATAGGATTG     11040

TACTCAGGTG AGTAGGGAGG AAGAGGTAAA AGTTTATACC CAAACTCTTC ACACAAGAGT     11100
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838

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TCTAGCTTCC CCATTCTATG GAATCTTGCA TTATCCATAA TAATAACCGA TGGTGTGGTT     11160

AATGTTGGTA AGAGAAACTT CTGAAACCAA GCTTCAAAAA AGTCGCTCGT CATCGTCTCT     11220

TCGTAAGTCA TTGGAGCGAT TAACTCACCA TTTGTTAGAC CTGCAACCAA AGAAATCCTC     11280

TGATATCTTC TTCCAGATAC TTT                                            11303
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(2) INFORMATION FOR SEQ ID NO: 116:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3112 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

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CCTTAGATTT CCACTTGCCA GAGGAATTGA TTGCCCAAAC GCCCCTTGAA AAACGTGATG      60

CCTCCAAACT CCTCATCGTC AACCGTGAGA CAGGAGAAAT GCAAGATAAA CATTTCCACT     120

CTATTATTGA TATGCTGGAA CCTGGTGATG CCCTTGTCAT GAACGACACC CGAGTTCTCC     180

CTGCCCGCCT CTATGGTCAA AAAGTGGAGA CAGGAGGTCA TGTGGAACTT CTCCTCCTTA     240

AGAACACTAG TGGAGACGAG TGGGAAGTTC TGGCTAAACC TGCCAAACGC CTCAAGGTCG     300

GTACTCGTAT CAGCTTTGGT GATGGCCGCC TCAGCGCTGT CGTTACAGAA GAATTGACCC     360

ACGGGGGACG CATTGTCCGC TTTGAATACC AAGGAATTTT CCTAGAAGTC TTGGAAAGTC     420

TGGAGAAAT GCCTCTGCCA CCTTATATCC ACGAAAAATT AGATGACCGT GAACGTTATC     480

AAACCGTCTA CGCCAAGGAA AGTGGCTCTG CTGCAGCACC GACTGCTGGT CTTCACTTCA     540

CCAAAGAACT GCTGGCAGAA ATCCAAGCTA AGGGTGTTCA TCTAGTCTAT CTGACTCTCC     600

ATGTCGGACT CGGAACCTTT AGACCTGTTT CTGTGGATAA TCTGGACGAA CACGAAATGC     660

ACTCAGAGTT CTATCAACTT TCTGAGGAAG CTGCTGCCAC CCTTCGCTCT GTCAAAAAAA     720

ATGGTGGTCG TGTCATCGCT GTCGGAACCA CTTCTATCCG CACCTTGGAA ACTATTGGTT     780

CCAAGTTTGA TGGGCAAATC CAAGCAGATT CTGGTTGGAC CAATATCTTT ATCAAACCTG     840

GGTATGAGTG GAAGGTCGTG GATGCCTTCT CAACCAACTT CCACCTGCCA AAATCAACTC     900

TGGTCATGTT GGTTTCTGCC TTTGCAGGCC GTGAATTAGT CTTAGATGCC TACCACCATT     960

CCATCCAAGA ACACTACCGC TTCTTCAGTT TTGGTGACGC CATGTTTATT TATTGAGAAA    1020

GAATTTCTCT AAATCTTCTA ATACCAATAA ATCGCTAAGA TATTATTTCA AAGAACATCT    1080

ACAATTGAAA CTCTAGCTAG CTGTAGAAGA GGCCTAGTAC ATTGAAATTA AAATGCTTCC    1140

CCCTAGCTTC GAAAATATTG CCATAGATTG CGTTGACTCT CCAAATTGAT TCATCTATAT    1200
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839

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TTTATTTCAG CTTCCTATAC TTTCTTCGCT GTTTGTAAAT CAAAATGCAA GACACATGAG        1260

TAGCACCATA TTTGTTACTC TTATCTGTCC TCTCAAGAGA CTATTATGAG TTATTTCAGA        1320

ATCATTCACT ACTTTGACCC TGACTCTCCT TAGTCTCAAA ATCAAAGACT TATACTCTTC        1380

AAAAATCTCT TCAAACCGCG TCAACGTCAC CTTGGATTAT ATATGTGatC TGaCTTCGTC        1440

AGTTCTATCT ACAACCTCAA AGCAGTACTT TGAGCAACCT GCGACTAGTT TTCTAGTTTG        1500

CTCTTTGATT TTCATTGAGT ATTAAACAAA AAGTGAACAA ATCTGAATTC TAATGTACAG        1560

AAGACTAGGC TTGTTCACTT TTTTATAGTC GCTATAAGAT GACCTTATCT ATAGCTTTTT        1620

ATATATAATT ATATATTCAG ACATACTATT ATCAATTTTG TCGCAGGGAG GAATCTGTTA        1680

ACGCACCCAT TCACCATTAT CATTGACTCT ATAGCCATCT ATACTTGTAT TGACCGCTAA        1740

CTCACCCGAT GTATTTACAT AATACCATTT ACCACCAACT TGGAACCATT GATTGACTTT        1800

CATAGAACCG TTGCTGTTGA GGTAGTACCA TGAACTATTA ACTTGTACCC AACCTGTTGC        1860

CATGGAACCA TCAGTATTAT AAAAATACCA CATACCATTT TCTTGTTTCC AGTCTGTTGT        1920

TGGAGCAACT GCTTTAGCTG GTTCTACTGC TACATCTGTT CCTTGGTTAG ATGTAACAGA        1980

TACAGGATAC GAAGGAATAG ATGATTGCTC AGGAACAACA ACTTTTTCAG GTTCTCTCGT        2040

CCCTCTCCTT ATACGTCTTT TTACCATCTC TTTAGTAATT TGACGAGAAG TAGTTTCTTC        2100

AATTGTTCCA TCACGTTCAT CTACAGTATA GATTGTAGTA AGAGTAATTT ACCAATTTCT        2160

CCTACTTCTT CTACTTCTTG ACTTTTATCA AGAGTTGGGC CATCGAGATA TTCTGTTTCG        2220

ATTGGAATTT CTTGGACAAG AACTTGGGGC TTGGTTCTTT TTTTAACAAC TCTTGTTTGA        2280

GAGTCTTTTT TTTGACTTAA AGTACTCTCA GTTACTTGTC CACTCTTTCC ATCTACATTA        2340

TAAGTTATCG TTGTAACTGT TTTCCCATTC TTTCCTAGAG TAATCTCTTG CTCCTGTCCT        2400

GCAGAAAGGT CATTGTCTGC TTCATATTTA GTAGCAAATG GAACAAGAAC TTCTTCAACC        2460

TTGCTTTTAG CTGGAACTTT GATAACTGTA TCCGTGGCTT CTTTTCTATC AACAGTAACC        2520

TGTTCGGTAA CATAACCAGT CTCTGGATTA ACATCGTAGG TCCTTGTCGT AGTTACATAG        2580

CCATCCTCTC CATCAATTGT AACAGGATTT TCACTACGGT CTTTTGTTTC ATCTTTTTCA        2640

TAACGAATTC GCGTACTTGA AATTTTCTTG GTTACTACCT TAGGTTTAGT CGCTACTTTT        2700

ACAATAATAT CCCCATTGTC AGCGTCATCA TACTCTATTC CCTCTTCTTT ATCTCTAGTA        2760

TCATCTCTGA CATATTGAAT CCCATCAGCA GCATGAACAA AACTTGTATT CAGATTCCTC        2820

CTAAAAATAA AGTTAGCCCG ATTACCGCAG AACCAAAAAT CTTTCCGAGT TTACGTATTG        2880

CATAGCGCTT ATTAGTATTA GATTTTGCCA TTACATCCTA CTTCTAGTAT AGCATCTTTT        2940
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                                       840
CTATCAAACG TTAAACAATA TACGTTATAT ATAAAAATAGA CTTAGAATGA TATATTGATT   3000

ATTGAACTAA CACTTTAACT ATATCGTAAT CAATCTCATA TATAAAGGAT TGCAGACATC   3060

TTATCTAAAT ACATGCGAAT ATATTTAGAT ACAAACATTC CAACTTGATA AT   3112

(2) INFORMATION FOR SEQ ID NO: 117:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4327 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

CCCAAAAATC TCTTCAAACC ACGTCAGCTT CGCCTTGCCG TAGTATGGTT ACTGACTTCG   60

TCAGTTCTAT CCACAACCTC AAAACAGTGT TTTGAGCATC ATGCgGCTAG CTTCTTAGTT   120

TGCTCTTTGA TTTTCATTGA GTATAAAAAC AGATGAGTTT CTGTTTTCTT TTTATGGACT   180

ATAAATGTTC AGCTGAAACT ACTTTCAAGG ACATTATTAT ATAAAAGAAT TTTTTGAAAC   240

TAAAATCTAC TATATTACAC TATATTGAAA GCGTTTTAAA AATGAGGTAT AATAAATTTA   300

CTAACGCTTA TAAAAAGTGA TAGAATCTAT TTTTATGTAT ATTTAAAGAT AGATTGCTGT   360

AAAAAATAGTA GTAGCTATGC GAAATAACAG ATAGAGAGAA GGGATTGAAG CTTAGAAAAG   420

GGGAATAATA TGATATTTAA GGCATTCAAG ACAAAAAAGC AGAGAAAAAG ACAAGTTGAA   480

CTACTTTTGA CAGTTTTTTT CGACAGTTTT CTGATTGATT TATTTCTTCA CTTATTTGGG   540

ATTGTCCCCT TTAAGCTGGA TAAGATTCTG ATTGTGAGCT TGATTATATT TCCCATTATT   600

TCTACAAGTA TTTATGCTTA TGAAAAGCTA TTTGAAAAAG TGTTCGATAA GGATTGAGCA   660

GGAAGTATGG TGTAAATAGC ATAGGCTGAT GTCCATCATT TGCTTATAAA GAGATATTTT   720

AGTTTAATTG CAGCCGGTGTC CTGGTAGATA AACTAGATTG GCAGGAGTCT GATTGGAGAA   780

AGGAGAGGGG AAAATTGGCA CCAATTTGAG ATAGTTTGTT TAGTTCATTT TTGTCATTTA   840

AATGAACTGT AGTAAAAGAA AGTTAATAAA AGACAAACTA AGTGCATTTT CTGGAGTAAA   900

TGTCTTATTT CAGAAATCGG GATATAGATA TAGAGAGGAT CAGTATGAAT CGGAGTGTTC   960

AAGAACGTAA GTGTCGTTAT AGCATTAGGA AACTATCGGT AGGAGCGGTT TCTATGATTG   1020

TAGGAGCAGT GGTATTTGGA ACGTCTCCTG TTTTAGCTCA AGAAGGGGCA AGTGAGCAAC   1080

CTCTGGCAAA TGAAACTCAA CTTTCGGGGG AGAGCTCAAC CCTAACTGAT ACAGAAAAGA   1140

GCCAGCCTTC TTCAGAGACT GAACTTTCTG GCAATAAGCA AGAACAAGAA AGGAAAGATA   1200

AGCAAGAAGA AAAAATTCCA AGAGATTACT ATGCACGAGA TTTGGAAAAT GTCGAAACAG   1260

841

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TGATAGAAAA AGAAGATGTT GAAACCAATG CTTCAAATGG TCAGAGAGTT GATTTATCAA        1320

GTGAACTAGA TAAACTAAAG AAACTTGAAA ACGCAACAGT TCACATGGAG TTTAAGCCAG        1380

ATGCCAAGGC CCCAGCATTC TATAATCTCT TTTCTGTGTC AAGTGCTACT AAAAAAGATC        1440

AGTACTTCAC TATGGCAGTT TACAATAATA CTGCTACTCT AGAGGGGCGT GGTTCGGATG        1500

GGAAACAGTT TTACAATAAT TACAACGATG CACCCTTAAA AGTTAAACCA GGTCAGTGGA        1560

ATTCTGTGAC TTTCACAGTT GAAAAACCGA CAGCAGAACT ACCTAAAGGC CGAGTGCGCC        1620

TCTACGTAAA CGGGGTATTA TCTCGAACAA GTCTGAGATC TGGCAATTTC ATTAAAGATA        1680

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GGTCAAATCT ACAGATTCGG AATCTCACTG TGTATAATCG TGCTTTAACA CCAGAAGAGG        1800

TACAAAAACG TAGTCAACTT TTTAAACGCT CAGATTTAGA AAAAAAACTA CCTGAAGGAG        1860

CGGCTTTAAC AGAGAAAACG GACATATTCG AAAGCGGGCG TAACGGTAAC CCAAATAAAG        1920

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GACGTAGTGA AGATAATGGT AAAACTTGGG GTGACCGAGT AACCATTACC AACTTACGTG        2100

ACAATCCAAA AGCTTCTGAC CCATCGATCG GTTCACCAGT GAATATCGAT ATGGTGTTGG        2160

TTCAAGATCC TGAAACCAAA CGAATCTTTT CTATCTATGA CATGTTCCCA GAAGGGAAGG        2220

GAATCTTTGG AATGTCTTCA CAAAAAGAAG AAGCCTACAA AAAAATCGAT GGAAAAACCT        2280

ATCAAATCCT CTACCGTGAA GGAGAAAAGG GAGCTTATAC CATTCGAGAA AATGGTACTG        2340

TCTATACACC AGATGGTAAG GCGACAGACT ATCGCGTTGT TGTAGATCCT GTTAAACCAG        2400

CCTATAGCGA CAAGGGTGAT CTATACAAGG GTGACCAATT ACTAGGAAAT ATCTACTTCA        2460

CAACAAACAA AACTTCTCCA TTTAGAATTG CCAAGGATAG CTATCTATGG ATGTCCTACA        2520

GTGATGACGA CGGGAAGACA TGGTCAGCTC CTCAAGATAT TACTCCGATG GTCAAAGCCG        2580

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CGCAATCTTC TCGTGTCATC TATTCAGATG ATCATGGAAA AACTTGGCAT GCTGGAGAAG        2760

CGGTCAACGA TAACCGTCAG GTAGACGGTC AAAAGATCCA CTCTTCTACG ATGAACAATA        2820

GACGTGCGCA AAATACAGAA TCAACGGTGG TACAACTAAA CAATGGAGAT GTTAAACTCT        2880

TTATGCGTGG TTTGACTGGA GATCTTCAGG TTGCTACAAG TAAAGACGGA GGAGTGACTT        2940

GGGAGAAGGA TATCAAACGT TATCCACAGG TTAAAGATGT CTATGTTCAA ATGTCTGCTA        3000
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842

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TCCATACGAT GCACGAAGGA AAAGAATACA TCATCCTCAG TAATGCAGGT GGACCGAAAC   3060

GTGAAAATGG GATGGTCCAC TTGGCACGTG TCGAAGAAAA TGGTGAGTTG ACTTGGCTCA   3120

AACACAATCC AATTCAAAAA GGAGAGTTTG CCTATAATTC GCTCCAAGAA TTAGGAAATG   3180

GGGAGTATGG CATCTTGTAT GAACATACTG AAAAAGGACA AAATGCCTAT ACCCTATCAT   3240

TTAGAAAATT TAATTGGGAA TTTTTGAGCA AAAATCTGAT TTCTCCTACC GAAGCGAACT   3300

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GTATTGGTCA ACAAGGCTCC AACCCTTCAA TTGGCAAATG GTAAAACAGC GACTTTCCTA   3420

ACCCAGTATG ATAGCAAGAC CTTGTTGTTT GCAGTAGATA AGGAAGATAT CGGACAGGAA   3480

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AAGCTCGAGA AAGGACAAAT TTTGTCCTTT CTTTTTTGAT ATTCAGAGCG ATAAAAATCC   3960

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GATTGTCCTC AATGAGTCCG AAAAATTTCT CCGGTTCCTT ATTCTGAAAG TGAAACAGCA   4200

AGAGTTGATA GAGCTGATAG TGATGTTTCA AGTCTTGTGA ATAGCTCAAA AGCTTGTTTA   4260

AAATCTCTTT ATTGGTTAAA TGCATACGAA AAGTAGGGCG ATAAAAATGT TTATCGCTGA   4320

GTTTACG                                                           4327
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(2) INFORMATION FOR SEQ ID NO: 118:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3521 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

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CTCTGGCCCT GCCACTCCAA CGTTTTGTCA GGGTGCTTTT TTCATAAAGG AGTTCTTATG   60
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843

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TTAGATATCA AACGTATTCG TACAGATTTT GAAGCTGTCG CAGAAAAATT AGCTACACGT    120

GGTGTAGATG CTGCTGTCTT GAATGAAATG AAAGAAATCG ATGCTAAACG TCGTAACATC    180

TTGGTCAAGG TTGAAACTCT CAAAGCAGAA CGTAACACAG TTTCTGCTGA GATTGCCCAA    240

GCTAAGCGCA ACAAGGAAAA TACAGATGAC AAGATTGCTG CCATGCAAAA TCTATCTGCT    300

GAGGTTAAAG CCTTGGATGC TGAATTGGCA GAAATCGATG CTAAATTGAC AGAATTTACA    360

ACGACTCTTC CAAATATCCC AGCTGACAGC GTTCCTGTTG GGGCTGACGA AGACGACAAT    420

GTGGAAGTTC GCCGTTGGGG TACTCCACGC GAGTTTGACT TCGAACCTAA AGCTCACTGG    480

GATCTCGGTG AAGACCTTGG TATCCTTGAC TGGGAACGCG GTGGTAAGGT AACAGGCGCT    540

CGCTTCCTCT TCTATAAAGG CCTCGGTGCT CGTTTGGAAC GTGCTATCTA CAACTTTATG    600

TTGGATGAAC ATGGAAAAGA AGGCTATACT GAAGTCATCA CACCTTACAT AGTCAACCAT    660

GATTCTATGT TTGGTACTGG TCAGTATCCA AAATTTAAGG AAGATACTTT TGAACTCAGC    720

GATACCAACT TTGTCTTGAT TCCAACTGCT GAAGTTCCTC TGACAAACTA CTACCGTGAT    780

GAAATCTTAG ACGGCAAAGA TCTTCCAATC TACTTCACTG CCATGAGTCC GTCATTCCGT    840

TCTGAGGCTG GTTCTGCCGG TCGTGATACG CGTGGCTTGA TCCGTTTGCA CCAATTCCAC    900

AAGGTTGAAA TGGTCAAATT TGCCAAACCA GAAGAATCTT ACGAAGAATT GGAAAAAATG    960

ACAGCCAACG CTGAAAACAT TCTTCAAAAA CTCAACCTTC CATACCGTGT CGTTGCTCTC    1020

TCTACTGGAG ATATGGGCTT CTCAGCTGCG AAGACTTACG ACTTGGAAGT GTGGATTCCA    1080

GCACAAAACA ATTACCGTGA AATCTCAAGC TGTTCAAACA CAGAAGATTT CCAAGCCCGT    1140

CGTGCCCAAA TCCGTTACCG TGATGAAGCA GATGGCAAGG TGAAACTCCT TCATACCTTG    1200

AACGGTTCTG GACTTGCAGT TGGACGTACA GTGGCTGCAA TTCTTGAAAA TTACCAAAAT    1260

GAAGATGGTT CTGTGACCAT CCCAGAAGCA CTTCGTCCAT ACATGGGTGG AGCTGAAGTC    1320

ATCAAACCAT AAAAAAATAAG GTTTAGCTAT TTCTAGCTAG ACCTTTTTTC GTAACCAAAT    1380

CAGATAAGCA CCTAGTACAA AGAATAAAAT AGTTAGGCAT ATAATGGTTT CAGCCAATAC    1440

CAGGTAATCC AGAAATGGAA GTTTCAAAAT TCCCTGAGCC ATCTTGAGCG AGGTCGCTGT    1500

GATAATGGTT GGGAAGGTGA GGGCTGAGAA GGCTGGTTGA AAACCTTGTT TTAAAATGTT    1560

GGGCAGACGA GTTAAAACAA AGAAAAAGAA GGATTGAGAA GCCAAAATCA TGACAATCAA    1620

GACCCAAGTC GGCAGGCTGG TTCCTCCTAC TCGAACTAGA GAAGCCAAGA GTAGAGAAA     1680

AGGAGCACAG TAGATTCCTT CTTGTCCAAG CAAGGCTAGT GGGAGTGGAT GTTTCTTTAA    1740

ATCGCTATAA ATAAGGGGAT AGAGATAGAA GGTCAAGAGA AAACCAAAAC TCAAGGTCGC    1800
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844

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ATAGGCAATT TCGATAATAC CTACCAGAGG ATAGGTCAAG GCAGCCACTG CTATCCCCAC    1860

ATAGAGAACC GTCCAGCTTG GAGTGGCATG AACCCTCCGC CCTGGACAAG CAAACTTGAT    1920

GGTAAAACCA GCAATCAAGG TCAAATCCAA GAGAAATGAA AACCACCAAA TCCCTTGTGC    1980

TACCAAAGGA AGATAAGAGA ATACGCGAAA GACATAGGTC GATAAAATCA TCCCAGCCAT    2040

AGGAAAGGTT GCCATTCCTG ACAAAGAGG GGGCTTGGTC AATTCTTGCT TGGTTTCTTT    2100

CCAATTAAAG AGATGCAGAA TTAGAAAGTA AATCCATAAA ACCAAACCAA TCAGACTAAA    2160

AAGATGGGAT AGAACCGGCA ACGTATCTAA AATAAGATTT CCAGCTCCTG CCAAACCTAG    2220

CAAACAACCT GAAAATACTA AGGGGAGTTT TTTCATCCTA ACCTCCAATA ATCATGTTAG    2280

TTTCAGTATA ACATAAAAGC GCTTAAATGA GGATTTAAAA AAACGAGTCC GCTTATTTCA    2340

GACTTCATTT TACTCAGATA TGAATTAGGC ATAAGGTTGC AATTCTGGAT TAATTGGTGT    2400

ATTAGCTAAG TTGTTGGCAT AGTTACAGAG GATTGCTAGG CTGACACCAA AAACCACATC    2460

CAAGGCATTT TGTTGAGTGT AGCCAGCTTC TAAAAACTCA GACAAGGCTT CATCTCCTAC    2520

ACGACCCTTG GTATTGATAA CTGCCAAGGT AAACTTAGCT AGGGTATCCA ATTTAGGATC    2580

TGTTTCAATT GGAGTACGAT TGCGAAGAGC TTGAATCAAG TCATCATTCA TCTGGATTTG    2640

TTTGATGGAA AAGGCTGTGT GACCTGCGAC ACAGAAGGCA CAACCATTGG TCACGGCTGC    2700

CGTGATTTGC ACCACTTCAC GCTCAACGGG TGTCAGGCTG TTGCGACGGT GGATAGATGA    2760

GACAATTTGG TAGGCTTCTA AAACAGTCGG GGCATTGGCC AAGAGACCGA TTAGGTTGGG    2820

AATATAGCCA TTGTTGTCTT TTTCTACTGT TTCAAGAATT TCTTTCACTT CTGCTGGTGC    2880

TGACTCTACT GTATGGATAG TAAATGTTGT CATAAGATAC CTCTTTTCTT ATTATTGACA    2940

CTAATATTAT TGGAAAATCT TATAAAATCC TGATTCCTAA GTTTATCTAA GATAAAGCTT    3000

TATTCTCTCA TAAGATTTTC GTTGTTATAT TAGTTTATCA CACTTCCAAT CACTTGTATA    3060

ATATATATTA TATATCAGGC TGATAAAAAT TATTTATAGG CAAAAAAATC ACACGAGCTG    3120

TGTGATTCCA TTATTTGTCA AAATACTTTT TAGTTTCAGC AATAACGACT GGCGACAAGA    3180

CCAAGAGGGC AATCAAGTTT GGCAGAGCCA TCAAGGCGTT AACGATATCT GCGATAATCC    3240

AGACCATATC CAACTCGATA AATCCTCCTA ACAAGACCAT GAGCACAAAA ACCACACGGT    3300

AGAGCCAGAT AAAGCGAACC CCAAAGAGGA ACTCAAAACA GCGTTCTCCG TAATAGTTCC    3360

AACCTAGAAT CGTTGTAAAG GCAAAAAGTA CAAGGAAGAT GGTCAAGAGA GCAGGCCCAA    3420

AGTGTGAAAA GTTTGTTGAG AAAGCTGACT GAGTCAAGGC AACCCCATTC AAGTCACCGC    3480

TCCAAACTCC AGTTACCAAG ATGGTCAAAC CAGTTAGAGT A                        3521
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(2) INFORMATION FOR SEQ ID NO: 119:

845

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 1968 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

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AACCTGGGCA AGCAAGCTAA AAGCAATGGG ACCTGGAATC CTAATGGCAA CTGCCGCTGT      60

TGGAGGTTCC CACATTGTAT CCTCAACTCA AGCTGGCGGT TCTTACGGTT GGTCTCTACT     120

TCTCTTGGTC ATCTTAGCCA ATGTCTTTAA ATATCCATTT TTCCGTTTTG GTGCTGAATA     180

CACAGCTGAT ACTGGAAAGA CTTTGGTTGA AGGTTATGCC GAAAAAGGAA AACTCTATCT     240

CTGGATTTTC TTTATCCTCA ATGTCTTTTC GGCTATGGTC AACACGGCTG GTGTTGCCAT     300

TCTGTGCTCA GCTATCATCG CCAGTGCCTT CCCAATGATT GGACTTAGCA TTACTCAGTG     360

GTCCCTCATT CTCGTTGCAA TCATTTGGGC TATGCTACTC TTTGGAGGCT ACAAACTTTT     420

AGACGGCATG GTCAAATGGA TTATGTCTGC CTTAACCATT GCGACTGTTC TTGCAGTTAT     480

CATTGCGGCG GTCAAGCATC CAGAATACAG TTCTGATTTT GTCGAGAAGA CACCTTGGCA     540

AATGGCAGCT CTGCCCTTCA TCGTCTCCCT CCTAGGATGG ATGCCGGCTC CTATTGAAAT     600

TTCAGCCATC AATTCACTTT GGTCAGCTGA AAAGAGAAAG ACCGTCAACT TTAACACAGA     660

AGACGCTCTG TTTGACTTTA ACACTGGTTA TATTGGAACA GCTATCCTAG CCGTCTTCTT     720

TGTGGCACTG GGAGCACTGA TTCAGTATCC TACAGGGCAG GCGGTTGAAG CTGCTTCAGC     780

CAAATACATC TCTCAATTCG TGGGCATGTA TGCCTCTGTT CTTGGCGAAT GGTCCCGTTA     840

CTTGATTACC TTTATTGCCT TCCTCTGTAT CTTTGGAACA GTTATAACTG TTATCGATGG     900

CTATTCTCGC GTTAATCAGG AATCTCTCCG ACTGCTAATC AGTCAAAAAG AGGACAATCG     960

TAAATCTTTG AACATCTGGA TGACCATCAC TGCTATCATC GGTATCGTCA TTATCAAGTT    1020

CTTCGCTGGT CAGGTTTCAA CCATGCTCCG CTTTGCCATG ATTGGCTCTT TCCTGACAAC    1080

ACCTTTCTTT GCTCTTTTGA ATTACGCCTT GGTAACGCGT GAAAACAAAA ATCTTCCTTC    1140

TTGGCTCAAA CACCTTGCCA TTGCGGGATT GATTTTCCTC TTTGCTTCGC CATCTTCTTT    1200

ATCTACGCAC TCGCAATCGG AAAAGCAGGG TAAGGGACAA GCGCGAGATG AAGATAAGGT    1260

TTCATTTCAA GAGAAAATTC AGCAAATATT TCTATGATAA AAAGCATAAG AACAAGGTTT    1320

TGAAGACCTG AACTTATGCT TTTTTACGTT CTTAAAGACT GTTTATACTC AAAAAACAGT    1380

TGAACAACTT CAACCACCTC TTATAAGAAC TTTATACTAT TCGAGAATCT CTTCAAACCA    1440
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846

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CGTCAGCTCT ATCTGCAACC TCAAAGCTGT GCTTTGAGCA ACCTGCGACT AGCTTCCTAG    1500

TTTGCTCTTT GATTTTCATT GAGTATTAAT TCTCCTTTTC CAACTCATAC AAATCTGCGA    1560

TAATAGCTGC GACATGTTTG ATATCTTCCA GCATGCCTCG CATTTCAAAG TCAGCCAATA    1620

CAGGGAAGCC AAAGCGTTGA CTGTATTGCT TGGCTGTTAG GCAGTATTGG TTATTAAAGT    1680

TACGATTTCC TGACCCAACC ACACCAAAAC ACTTACTAGC ATTGTTACCA TAGGCAATAA    1740

AATCTCCCAC CGGTGTCGTC AAAATCTCAA CATCTCCGTT ATCCACGCCA TTCCCACCTT    1800

CGAGATAGGT CGGCAAAAAA GCGACATAGG GATGGTCCAT TTCATAGAAA TTTTTGCCTT    1860

CCTTGACCAA ATCCTTGATA TGAATCTTTT GAACCTCAAT CCCTTTGTAC TGGGACAAGA    1920

GATAGTCTTT CAAGCGCGTC ACAAAACTTT CAGTGTTGCC ACTCAAGG               1968
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(2) INFORMATION FOR SEQ ID NO: 120:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 7172 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

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CCGCATTTTT TATCACTAGA CTCGAGACAT CTTTTGAGTG GCTCTTGCTC TCTGGTTTAA     60

TTTTCTTCCT TGCTCAAGGA CTCCTGCTAT TTCTCTTGGT CGTCCGACTC AAACATCAAT    120

TCGCTGAGAT TTATCCTCAA ATCAATAAAA AGATTCGCTT CTACTATTTA GGGGTTCTCA    180

CCATTGATTT TCTATTTTTT GTTCTCTTAG CCTTCATTAG TTCTCAGCGT TTTTCATCTC    240

TTATGCCAAT CATCACTGCT TGCCATTCTA CTTTTTATTA TATGACAGCT GACTACCTAA    300

GAGAAAACTA TCCAGACTTT TACGACAAAC ACATCTCTTT ATGGGAGTGT CTCTAAAGAA    360

AAGGAGGTTT TAGCATGAAA AAAATCATCT TCATCAAAAC CATTCAACTC CTTGTCATTG    420

ATGGAATCAT GCTGGCATTT TTGACATTTA AAAGGGGGCT TACTTGGGAC TGGATTTTGA    480

TTTATAGCGG TTGGCTCATT TTCTTTCATC CTGTGCTATT GACCTATCTT TCAAACCAAC    540

TTTGTGACCA CTTTAGTTAA CTCTATTCCC AGATTAGACC GAGATTCTGG CGTTTTGCTT    600

TACAAATTCT CCTATGGGAT AGCCTGATGA TTCTCTCCTT GGTGTCTTTA AGTGATATTC    660

CACTTTTCCT TCAGGGAACT CTCCTCATCC TAGGACATCT CATCCCTTCC TATCGCATCT    720

GCCAAAGCCT GAAAAGAGAC TTCCCCCAAG CATATCAAGA ACCGATTTCT TTTTGGAGTA    780

TTTTATGATA GATGAGAAAG ACCAAGCCGA CTGGGCTTGG TCTTTCTTAT CTCTTTTTAG    840

TATCTAGGAT AATGGTAACA GGTCCATTAT TAACCAGCTC AACCTGCATA TCTGCTCCAA    900
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847

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AGATGCCTGT CTGAACGGGC ACTTCTTGCG CTAATTTTTG ATTGAAAGCA TCATAGAAGT      960

CTGATGCCAT ATCAGGTTTA GCTGCCCCTG TAAAGgCTGG ACGATTGCCT CTCTTAGTAT     1020

CCGCAAAGAG GGTAAACTGA GAAATAGAGA GGATTTCTCC TTCAATATCT TTGACAGACA     1080

GGTTCATCTT GCCTTCTGCG TCTGAAAAAA TCCGCATATT GACCAGTTTT CTCACAGCAT     1140

AGTCCAAATC TTCCTCTTGG TCCTCTGGTC CAACACCAAC CAGCAATAAA AGTCCCTGAT     1200

TGATTTTTCC CTGAATCTGG CCTTCTATAC TCACTTGGGC TTTTTTAACC CGTTGGATAA     1260

TGATTTTCAT AATAGCCTTT CTAGTAAGAG CTAGGACAAC TAGCCGTTGG TCCGTTTGAC     1320

AGAGTAAACT TCTGGCACAC TCTTAATTTT ATCGACAACC GTGGTCAGTG TAGAGAGGTT     1380

GGCAATACCG AAGgACACAT GGATATTAGC AAACTTCATA TCCTTGGTTG GTTGGGCATT     1440

GACCGTTGAA ATATTCTTGG TTGTATTTGA AAGAACTTGC AGTACATCGT TCAACAGTCC     1500

TGTACGGTTG AGACCGTAGA TATCGATATG GGCCATATAC TCCTTATTTG AGCTAGGGTA     1560

CTGGTCTTCC CATTCCACAT CAAGGAGACG TTGCTCGTAG TTTTCTTGGG CACGCAGGTT     1620

CATACAGTCC ACACGGTGAA TAGCCACACC ACGACCCTTG GTAATGTAGC CAACAATATC     1680

GTCACCAGGC ACGGGGTTAC AACACTTAGC AATCCGCACT AGGAGACCAG AAGCACCTTC     1740

AATAACCACT CCCCCCTCAT GCTTGACCTT GAGGGTTTCT TTATTTTCAA CCTTGACCTC     1800

GCCACCTTTG ACAAGCTCCT CTGCCTCAGC TTTGGCCTTG GCACGCTCTT CCTCACGGCG     1860

TTCCTTTTCA GTCAGACGGT TAAAGACGGT AATCGCACCG ATTTCCCCAA AACCAATGGC     1920

CGCAAAGAGG GAGTCTTCTG TCTTGTAACT GGTCTTTTGC AGAACTTGAT CCATGTGGCG     1980

CTTGTCCATA AATTTATTTG CCACATAGCC ATTTTCTTGG AACTGAGCCA TCAGCATCTC     2040

ACGACCCTTG TTGACAGACA ATTCCTTATC TTGGTTTTTA AAGAACTGGC GAATCTTATT     2100

GCGCGCCTTG CTAGTCTTGA CCATATTGAG CCAGTCACGG CTAGGTCCAA AGGAGTTCGG     2160

GTTGGCGATA ATTTCAACCT GATCCCCTGT CTTTAACTTG GTTGTCAGTG GAACCATGCG     2220

GCCATTGACC TTGGCACCAG TTGCTTTTTC ACCGACCTTG GTATGGATTT CGTAGGCAAA     2280

ATCAATCGGT CCTGAATCTT TGGGAAGGGA ACGGACAGCT CCATCTGGGG TAAAAACGTA     2340

AATCTCCTCA GCCAAATAGT TTTCCTTAAC AGAGTCCACA AATTCCTTAG CATCATCAGC     2400

CTGGTCTTGG AGCTCCATCA TCTCCTTGAT CCAGTTCATT CCAATAGCTG ATTCCTTGCT     2460

GTTAACTTGC CCCTTTATAC CTTTCTTATA AGCCCAGTGA GCCGCAACCC CGTACTCAGC     2520

CACCTCGTGC ATTTCCTTGG TTCGAATCTG GAATTCAATC GGCCCTTTTG GTCCATAAAC     2580

AGTCGTATGG ATAGACTGAT AACCATTGGC CTTGCGGTTG GCGATATAGT CTTTGAAGCG     2640
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848

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ACCTGGCATC GGTTTCCAAA ATTCATGCAC GTAACCAAGC ATGGCATAAA CATCACTTTG    2700

GGTATCTAAA ATACAACGAA TAGCAATCAG ATCATAGATT TCCTCAAACC GTTTTCTCTT    2760

GTCCTGCATT TTGCGGAAAA TTGAGTAAAT ATGCTTGGGA CGACCATAAA TCTTCCCTTT    2820

CAAGTGACGT TCTGTCGTAT ACTCCTCTAA TTTTGTGACT ACCTCATCCA CCAAGGCCTC    2880

ACGCTCCCTG CGCTTTTCCT TCATCATATG GGTAATCTTG TAAAACTCCG TTGGATTGAG    2940

ATAACGGAAA GACAAGTCTT CTAATTCCCA TTTGACACTG GAAATCCCCA AACGATGGGC    3000

AAGCGGGGCA TAGATTTCCA TGGTTTCTTT GGAAATACGG TCCTGCTTGT CTTTTCGAAG    3060

ATGTTTCAGG GTCCGCATAT TGTGCAAGCG GTCAGACAGT TTGACCAAAA TAACGCGGAT    3120

GTCCTCAGAC ATGGCCATGA GCATCTTGCG ATGATTTTCC GCTAATTGCT CCTCGATCGA    3180

TTTGTACTCG ACCTTGCCAA GCTTGGTAAC TCCGTCAACA ATCATCCGCA CATCAGGACC    3240

AAACTCTCTT TCCAAATCGT CCAAAGTCGC ATCTGTATCT TCCACCACAT CATGCAAGAA    3300

TCCACAAGCT ACTGTTACAG CATCCAGCTT TAGCTTAGCT AAAATACCTG CCACTTGGAT    3360

AGGGTGAATG ATATAAGGCT CGCCTGATTT GCGATATTGA CCACTGTGGC ATTCAACAGC    3420

ATAGACCAAG GCCTTATGGA CAAAATGAAC ATCCTCTTCC GTTAAATATT CTTTGGTTAA    3480

AGCGACAACT TCTTCGCCTG TTAAATTCAC TTCTTTCGGC ATCTCTACTC TCCAATTCTT    3540

CCTACCATTT TATCACTTTT TTAAGAATAT GAAAACTAGA TTGGAACAGA ATAAGAAAAA    3600

AATAATTCAA AATTGCTTGA TAATTCTGAA TTATTGGTCC GTAATATACT ACGAAGTTAG    3660

ATTTTAAACT TAGGTGATAG AAGGAGAGAT AGAAGAACGG AAACCATATT GTAACCCAAA    3720

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ACTAGGAAAC TAGCCGCAGG TTACTCAAAG CACCGCTTTG AGGTTGCAGA TAAAGTTGAC    3900

GCGGTTTGAA GAGATTTTTG AAGAGTATAA AAATCCTCAA GATACTTTCT TCTATCCTTT    3960

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CTATGCTAAC GACCAGAACC TGCCCAGTAG GATAACTTAT AGTGAATATA GCGACAAATG    4140

AGAAGCCAAC TACGGTAGCA CTCTAAACAT CACGTCTATC AAACAAGCTA ATGACGGAGT    4200

TTATGCAACC TATGAAGGGC AATTGACACC TTTCCAATAT TGATAAATTG ATAACCAGCC    4260

TGTCTTCATC TAGTCATGCT GGTTTTTAAG TTCATTTTAA ATCCTTACCT ATTCTCCCTA    4320

ACTGTGCTAT ACTTAATTTA TACTCAATGA AAATCAAAGA GCAAACTAGA AAGCTAGCCG    4380

CAGGCTGTTC AAAGCACTGC TTTGAGGTTG CAGATAAAGT TGACGCGGTT TGAAGAGATT    4440
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849

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TTCGAAGAGT ATTAGTACAT TCTTTGAGAT TGGAGCTAGT ATGAAAATCC ATAAAACCGT    4500

GAATCCTGTT GCCTATGAAA ATACCTATTA TCTAGAAGGC GAAAAGCACC TCATCGTCGT    4560

CGATCCTGGT AGTCATTGGG AAGCCATTCG TCAGACAATC GAGAAGATCA ACAAACCGAT    4620

CTGTGCTATT CTCTTGACCC ACGCCCATTA TGACCATATC ATGAGTCTGG ACTTGGTTCG    4680

CGAGACGTTT GGCAATCCTC CTGTCTATAT CGCAGAGAGC GAAGCCAGCT GGCTCTACAC    4740

TCCTGTCGAT AATCTCTCCG GTCTCCCTCG CCACGATGAT ATGGCAGATG TGGTCACAAA    4800

ACCTGCAGAA CACACCTTTG TCTTTCACGA AGAATACCAA CTAGAGGAAT TTCGTTTTAA    4860

GGTTCTACCG ACCCCAGGGC ACTCTATCGG TGGTGTTTCC CTAGTCTTTC CTGATGCTCA    4920

TCTAGTCTTG ACGGGAGATG CTCTATTCCG CGAAACTATC GGACGGACCG ACCTTCCGAC    4980

TGGTAGCATG GAGCAACTCC TTCATAGTAT CCAGACCCAA CTCTTCACCC TACCAAACTA    5040

CGATGTCTAT CCAGGACATG GTCCAGCTAC TACTATCGCT CACGAAAAGG CCTTCAATCC    5100

CTTTTTCTAG CAAGATGATG ACAATCGAAA TTTAAGTAAA CTATCCAGCA AATCTTTCTA    5160

TTACAAAAGG CATCCTATCA AGGTTTTCAC ACATGATTGG ATGCCTTTTT TCTGATGACT    5220

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TTCTTTGACA TCATAGGTTG TAAAGAAATC GTCGAAGTTT GGTACTTGCA CATTGACACG    5340

GAGTTTGGCT GGTGCGTGCA CATCGACGCT AGCCAAAAGT TTCATAAATT CTGGTCGACC    5400

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CACTGCCCCA ATACCACCGT AGTTAGCAGA AGATGACTGA TGCAAGTCAT AGAAAGGCGC    5760

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GTGCTTGATT TCCACACGCG CAAAGGCTAG AGCATTCTCA AAAAGACTGG CAGTTTCATT    5940

CACTACCTTA TCCTTGTAAC GTGCAGGCAA TTCTTCTGGA TAGCCAATAT AAGGTTTGAT    6000

CACATTGAGC TTCACGATAG CCTGTTTACA GGTTTCTGGA GTGAGCCAGT CATTCTTAAG    6060

CAGACGCTCC TTATAAACAT CAATCATGGT TGCCACTTTT TTCTCCACAT CCGCCTTGGC    6120

TTCTGGAGAG AACTTCTCAC GGGCGTACCA AAGACCCAGG GCTTGCTTGA AAGGTTCTTG    6180
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850

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TGCTAGATGA TAAGCTGCTT TGACCTTATC TTTTGCCTCT GGAACTCCAG AAAGGGCACG      6240

GCTGTAGGCA CCAGACAAAA CACGGATATC CTCTGTTAAA TAGCTGGTTG AAAGATTGAC      6300

AACACTCAAA ATCAAGGTTG CTTTAAGGAG AGACCAGGCT TCCTCACTGT AGAATTGCTC      6360

TGCTGCTTGC CAGAAACGTT CCTCGTCTAC AATAACCTTG TCTGGTAATT GCCCAATAAC      6420

TGCTTTGAAG AAGTCATCCA AAGGTAGGGC AGGCGCGAAT TTCTTGAAAT CTTCGTAAGA      6480

ATATGGATGA TAGAGTTTAG CATATTCTGA ACTTTCTTCA TTAGAGAGCA CCACTGCCGC      6540

AACTCGGCGG TCCAATTCAA GTCTTTTTTC TAGCAAGTCT TCAATTTCTT CATCAGAGAA      6600

ATCATAAGCC TTGAGGAGAT TTGCGCTGCT TTCTTTCCAA AGAGTCAAGA GCTCTTCGCG      6660

CTGAGGATGT TCTTCTGCAT AGTAGGTCGT ATCTGGCAAG ATTGTGCTTG GAGCGCTAGC      6720

CCATAGAACA TTGATTCTAG CATCCATAAA GTCTGGCGAT ACACCAAAAG GAAGGAAGTT      6780

TGGTTTTCCT GCAAGCTCAA ACTCTGCTAG TTTAGCTGTA AAATCCGCAA AAGTCTCCAA      6840

TTCTTGGAAT TCTTTAAGGA GTGGTAAGAC AGGTGTGATA CCGTCAGCTT CTCTCTTGTC      6900

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TTCTTCACCT GCTAACCACT TGTCTGTTGT CGCCAGCATC AGGTCTTCAA TTTCCTGGTC      7020

TAAATCAACA AAACCTCCTG TTTGAGACTT ATCTGCTGGG ATTTCAGCTG TCTGTTGCCA      7080

TTCTCCATTG ATAGCATCAT AAAAATCATC TTGATAACGT GTCATCTTGT TCTCGCTTTC      7140

ATTTGTATTT GCATTTATCT TAACAAAAAT CG                                    7172
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(2) INFORMATION FOR SEQ ID NO: 121:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 4518 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

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CGGGAAGTTA TGCGATCTAG ACTTCGTTCC TGTACAGCTA CTTTCTCAGG TGGTCTTGTT        60

GTTTGTATGA GTTTGTTTAG AGAGGATCTT TCTATGTCTT TCTTTCTTAT TTTTGTTTTA       120

TATGCTTTTC TGATTTCTTA TCTAATTTAT GGTTATTTCA GACTAAAAAG GAAATACCGA       180

GTAGATGAAT AGCAAGGTTC TAGGTCTTCA GATTGATTTT TAGCACTCTT GATAAAAGAG       240

TGCTAATTTT TTGAGTTTTT GTCTTGACAT TCTCTTCTAA GGGTGTATAA TAGAATCATG       300

AGTTAGCACT TGGATGCATT GAGTGCTAAT TGATCAGACA GAGAGGAGTG ATGAGATGGT       360

TACAGAGCGT CAGCAGGATA TTTTAAATCT GATTATTGAC ATCTTTACCA AAACGCACGA       420
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851

ACCTGTCGGA	TCAAAAGCCT	TGCAAGAGTC	TATTAACTCT	AGCAGTGCAA	CCATTCGTAA	480
TGACATGGCG	GAACTAGAAA	AACAAGGGTT	GCTTGAGAAG	GCTCATACTT	CAAGTGGTCG	540
GATGCCAAGT	GTTGCTGGTT	TTCAGTACTA	TGTGAAACAC	TCACTGGATT	TTGACCGGCT	600
GGCTGAAAAT	GAGGTATATG	AGATTGTCAA	AGCCTTTGAT	CAGGAATTCT	TCAAATTGGA	660
GGATATTCTG	CAAGAGGCTG	CTAACTTACT	AACAGACCTG	AGTGGCTGTA	CGGTAGTGGC	720
ACTGGATGTT	GAGCCGAGCA	GGCAACGTTT	GACAGCCTTT	GATATCGTTG	TTTTGGGGCA	780
ACATACAGCC	TTGGCGGTAT	TTACCCTAGA	CGAGTCGCGA	ACGGTTACTA	GTCAGTTTCT	840
GATTCCAAGG	AACTTCTTGC	AGGAGGATTT	GCTGAAACTG	AAGAGCATCA	TTCAGGAACG	900
TTTCCTCGGT	CACACCGTTT	TAGATATTCA	CTACAAGATT	CGGACGGAGA	TTCCGCAGAT	960
TATCCAGCGT	TACTTTACAA	CAACGGATAA	TGTCATCGAT	CTCTTTGAAC	ACATCTTTAA	1020
GGAAATGTTC	AACGAAAACA	TTGTGATGGC	GGGCAAGGTC	CATCTCTTGA	ATTTTGCCAA	1080
TCTAGCAGCC	TATCAGTTCT	TTGACCAACC	GCAAAAGGTG	GCCTTGGAGA	TTCGTGAGGG	1140
GTTGCGTGAG	GATCAGATGC	AAAATGTTCG	TGTTGCAGAC	GGTCAAGAGT	CCTGTTTAGC	1200
TGACCTAGCG	GTAATCAGTA	GTAAGTTCCT	CATTCCTTAT	CGGGGAGTTG	GAATTCTAGC	1260
CATTATCGGT	CCAGTTAATC	TGGATTACCA	ACAGCTAATC	AATCAAGTCA	ATGTGGTCAA	1320
CCGTGTTTTG	ACCATGAAGT	TGACAGATTT	TTACCGCTAC	CTCAGCAGTA	ATCATTACGA	1380
AGTACATTAA	GATTGAAATC	ATTAAAGGAG	GCGAACATGG	CCCAAGATAT	AAAAAATGAA	1440
GAAGTAGAAG	AAGTTCAAGA	AGAGGAAGTT	GTGAAAACAG	CTGAAGAAAC	AACTCCTGAA	1500
AAGTCTGAGT	TGGACTTGGC	AAATGAACGT	GCAGATGAGT	TCGAAAACAA	ATATCTTCGC	1560
GCTCATGCAG	AAATGCAAAA	TATCCAACGC	CGTGCCAATG	AAGAACGTCA	AAACTTGCAA	1620
CGTTATCGTA	GCCAGGACTT	GGCAAAAGCA	ATCTTACCAT	CTCTTGACAA	CCTTGAGCGT	1680
GCACTTGCAG	TTGAAGGTTT	GACAGATGAT	GTGAAGAAGG	GCTTGGGGAT	GGTGCAAGAA	1740
AGCTTGATTC	ACGCTTTGAA	AGAAGAAGGA	ATTGAAGAAA	TCGCAGCAGA	TGGCGAATTT	1800
GACCATAACT	ACCATATGGC	CATCCAAACT	CTCCCAGCAG	ACGATGAACA	CCCAGTAGAT	1860
ACCATCGCTC	AAGTCTTTCA	AAAAGGCTAC	AAACTCCATG	ACCGCATCCT	ACGCCCAGCA	1920
ATGGTAGTGG	TGTATAACTA	AGATATAAAG	CCCGTAAAAA	GCTCGCAGTA	AAAATAGGAG	1980
ATTGACGAAG	TGTTCGATGA	ACACAAGAAA	ATCTATCTTT	TTTACTCAGA	GCTTAGGGCG	2040
TGTTCGATTC	GGCAATTCTG	ACGGTAGCTA	AAGCAACTCG	TCAGAAAACG	GCAATCGCTA	2100
TGGCGTTTGC	CTAGCTTCCT	TACTAACTCG	TCGTCGAAAT	AAAATCGATT	TCGACTCCTC	2160

852

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GTGTCGCAAT TTACATAATA GAAAACTTGT CCGAAACGAC AATAAACTAT GAAGAAAGAT      2220

AAAATATGTT TGGCTTTGTA ATAGTGAGCG AAGCGAACCA AACACGATAC TCTTCGCCGT      2280

GGCGCTATTT GCGCAAATTT TGAGACCTTA GGCTCAAAGT TTAGTCAAAG AGATTGACGA      2340

AGTCAAGCTC TGACGGCGTC GCCACTGTCG CCACTTAAGA AGAGTATCAA AAAGAAAAAT      2400

AGAAAATTAA CTAACAAGGA GAAAAACACA TGTCTAAAAT TATCGGTATT GACTTAGGTA      2460

CAACAAACTC AGCAGTTGCA GTTCTTGAAG GAACTGAAAG CAAAATCATC GCAAACCCAG      2520

AAGGAAACCG CACAACTCCA TCTGTAGTCT CATTCAAAAA CGGAGAAATC ATCGTTGGTG      2580

ATGCTGCAAA ACGTCAAGCA GTTACAAACC CAGATACAGT TATCTCTATC AAATCTAAGA      2640

TGGGAACTTC TGAAAAAGTT TCTGCAAATG GAAAAGAATA CACTCCACAA GAAATCTCAG      2700

CTATGATCCT TCAATACTTG AAAGGCTACG CTGAAGACTA CCTTGGTGAG AAAGTAACCA      2760

AAGCTGTTAT CACAGTTCCG GCTTACTTCA ACGACGCTCA ACGTCAAGCA ACAAAAGACG      2820

CTGGTAAAAT TGCTGGTCTT GAAGTAGAAC GTATTGTTAA CGAACCAACT GCAGCAGCTC      2880

TTGCTTATGG TTTGGACAAG ACTGACAAAG AAGAAAAAAT CTTGGTATTT GACCTTGGTG      2940

GTGGTACATT CGACGTCTCT ATCCTTGAAT TGGGTGACGG TGTCTTCGAC GTATTGTCAA      3000

CTGCAGGGGA CAACAAACTT GGTGGTGACG ACTTTGACCA AAAAATCATT GACCACTTGG      3060

TAGCAGAATT CAAGAAAGAA AACGGTATCG ACTTGTCTAC TGACAAGATG GCAATGCAAC      3120

GTTTGAAAGA TGCGGCTGAA AAAGCGAAGA AAGACCTTTC TGGTGTAACT TCAACACAAA      3180

TCAGCTTGCC ATTTATCACT GCAGGTGAGG CTGGACCTCT TCACTTGGAA ATGACTTTGA      3240

CTCGTGCGAA ATTTGACGAT TTGACTCGTG ACCTTGTTGA ACGTACAAAA GTTCCAGTTC      3300

GTCAAGCCCT TTCAGATGCA GGTTTGAGCT TGTCAGAAAT CGACGAAGTT ATCCTTGTTG      3360

GTGGTTCAAC TCGTATCCCT GCCGTTGTTG AAGCTGTTAA AGCTGAAACT GGTAAAGAAC      3420

CAAACAAATC AGTAAACCCT GATGAAGTAG TTGCTATGGG TGCGGCTATC CAAGGTGGTG      3480

TGATTACTGG TGATGTCAAG GACGTTGTCC TTCTTGATGT AACGCCATTG TCACTTGGTA      3540

TCGAAACAAT GGGTGGAGTA TTTACAAAAC TTATCGATCG CAACACTACA ATCCCAACAT      3600

CTAAATCACA AGTCTTCTCA ACAGCAGCAG ACAACCAACC AGCCGTTGAT ATCCACGTTC      3660

TTCAAGGTGA ACGCCCAATG GCAGCAGATA ACAAGACTCT TGGACGCTTC CAATTGACTG      3720

ATATCCCAGC TGCACCTCGT GGAATTCCTC AAATCGAAGT AACATTTGAC ATCGACAAGA      3780

ACGGTATCGT GTCTGTTAAG GCCAAAGACC TTGGAACTCA AAAAGAACAA ACTATTGTCA      3840

TCCAATCGAA CTCAGGTTTG ACTGACGAAG AAATCGACCG CATGATGAAA GATGCAGAAG      3900

CAAACGCTGA AGCCGATAAG AAACGTAAAG AAGAAGTAGA CCTTCGTAAT GAAGTAGACC      3960
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AAGCAATCTT TGCGACTGAA AAGACAATCA AGGAAACTGA AGGTAAAGGC TTCGACGCAG        4020

AACGTGACGC TGCCCAAGCT GCCCTTGATG ACCTTAAGAA AGCTCAAGAA GACAACAACT        4080

TGGACGACAT GAAAACAAAA CTTGAAGCAT TGAACGAAAA AGCTCAAGGA CTTGCTGTTA        4140

AACTCTACGA ACAAGCCGCA GCAGCGCAAC AAGCTCAAGA AGGAGCAGAA GGCGCACAAG        4200

CAACAGGGAA CGCAGGCGAT GACGTCGTAG ACGGAGAGTT TACGGAAAAG TAAGATGAGT        4260

GTATTGGATG AAGAGTATCT AAAAAATACA CGAAAAGTTT ATAATGATTT TTGTAATCAA        4320

GCTGATAACT ATAGAACATC AAAAGATTTT ATTGATAATA TTCCAATAGA ATATTTAGCT        4380

AGATATAGAG AATTATATTA GCTGAACATG ATAGTTGTAT CAAAAATGAT GAAGCGGTAA        4440

GGAATTTTGT TACCTCAGTA TTGTTGTCTG CATTTGTATC GGCGATGGTA CCGTATCTGA        4500

CGAACGTTCA GCTTATAT                                                     4518
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(2) INFORMATION FOR SEQ ID NO: 122:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8145 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

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TGCTATTTTC GATTCCCTTG GGCGTTTTGA TTGCCTTTGC CTTGCAAGTC CATTGGAAGC         60

CCCTCCATTA TCTGATTAAC ATTTACATCT GGGTTATGCG AGGAACCCCC TTACTCTTGC        120

AACTGATTTT TATCTATTAT GTGCTCCCAA GTATTGGGAT TCGTTTAGAC CGCCTTCCTG        180

CAGCTATTAT TGCCTTTGTT CTCAACTATG CAGCTTACTT TGCAGAAATT TTCCGTGGGG        240

GAATTGACAC TATTCCAAGA GGACAGTATG AGGCCGCCAA GGTCTTGAAG TTTAGCCCTT        300

TTGACAGAGT GCGCTATATT ATCTTGCCCC AAGTGACCAA GATCGTTCTT CCTAGTGTCT        360

TTAATGAAGT TATGAGTTTG GTCAAGGATA CTTCTTTGGT CTATGCTCTC GGAATTTCAG        420

ACCTTATCTT GGCTAGTCGA ACAGCTGCTA ACCGCGATGC TAGTCTAGTT CCTATGTTCT        480

TGGCAGGAGC CATTTATTTG ATTTTGATTG GGATTGTGAC AATTATTTCC AAAAAAGTTG        540

AGAAGAAGTA TAGTTATTAT AGATAGGAGG CTGCCATGTT AGAATTACGA AATATCAATA        600

AAGTCTTTGG AGACAAACAA ATCCTGTCTA ATTTCAGTCT AAGTATTCCT GAAAAGCAAA        660

TCCTGGCTAT CGTTGGACCT TCTGGTGGAG GTAAGACAAC TCTTTTACGT ATGCTTGCAG        720

GTCTTGAAAC CATTGATTCA GGGCAAATCT TTTATAATGG ACAACCTTTA GAGCTGGATG        780
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854

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AATTGCAGAA GCGCAATCTA CTGGGATTTG TCTTCCAAGA TTTTCAACTA TTTCCTCATC    840

TATCAGTTCT GGAAAATTTG ACTTTATCGC CTGTGAAGAC CATGGGAATG AAGCAGGAAG    900

AGGCTGAGAA GAAGGCGAGT GGACTCTTGG AACAGTTAGG ACTAGGAGGA CACGCAGAGG    960

CCTATCCTTT CTCACTATCT GGTGGGCAAA AGCAGCGGGT GGCTTTGGCG CGTGCTATGA   1020

TGATTGACCC AGAAATCATT GGCTACGATG AACCAACTTC TGCCCTGGAT CCAGAATTAC   1080

GTTTGGAAGT GGAGAAGCTA ATCTTGCAAA ATAGGGAACT TGGGATGACC CAGATTGTGG   1140

TTACCCATGA TTTGCAGTTT GCTGAAAATA TCGCAGATGT ATTATTGAAA GTAGAACCTA   1200

AATAGGAGGA AAAATGGATG AAAAAATGGA TGCTTGTATT AGTCAGTCTG ATGACTGCTT   1260

TGTTCTTAGT AGCTTGTGGG AAAAATTCTA GCGAAACTAG TGGAGATAAT TGGTCAAAGT   1320

ACCAGTCTAA CAAGTCTATT ACTATTGGAT TTGATAGTAC TTTTGTTCCA ATGGGATTTG   1380

CTCAGAAAGA TGGTTCTTAT GCAGGATTTG ATATTGATTT AGCTACAGCT GTTTTTGAAA   1440

AATACGGAAT CACGGTAAAT TGGCAACCGA TTGATTGGGA TTTGAAAGAA GCTGAATTGA   1500

CAAAAGGAAC GATTGATCTG ATTTGGAATG GCTATTCCGC TACAGACGAA CGCCGTGAAA   1560

AGGTGGCTTT CAGTAACTCA TATATGAAGA ATGAGCAGGT ATTGGTTACG AAGAAATCAT   1620

CTGGTATCAC GACTGCAAAG GATATGACTG GAAAGACATT AGGAGCTCAA GCTGGTTCAT   1680

CTGGTTATGC GGACTTTGAA GCAAATCCAG AAATTTTGAA GAATATTGTC GCTAATAAGG   1740

AAGCGAATCA ATACCAAACC TTTAATGAAG CCTTGATTGA TTTGAAAAAC GATCGAATTG   1800

ATGGTCTATT GATTGACCGT GTCTATGCAA ACTATTATTT AGAAGCAGAA GGTGTTTTAA   1860

ACGATTATAA TGTCTTTACA GTTGGACTAG AAACAGAAGC TTTTGCGGTT GGAGCCCGTA   1920

AGGAAGATAC AAACTTGGTT AAGAAGATAA ATGAAGCTTT TTCTAGTCTT TACAAGGACG   1980

GCAAGTTCCA AGAAATCAGC CAAAAATGGT TTGGAGAAGA TGTAGCAACC AAAGAAGTAA   2040

AAGAAGGACA GTAAGATAAA ATAGTGGCTG AAACTGCGTT TTGATTAGCA AAACGTAGTT   2100

TTTTTTGTAA TCTAGGAAAA CGATAATAGC GATTGAATAT GGATAATTGA ATATGGAATA   2160

GCCCACTGTG ATTTCTAAAA CATTGTTAAA AATTGATTTG ACTTCCAAAA TTAAAATGTT   2220

CTGTAATGAA ATACTGATGT AACTGTTTTA GGAACAATAA AACGCATAAT ATCAAGGTTT   2280

TTGCACCTTA CATTATGCGT TTTTGTGATT TTAAGACTTG TTAGCTGATT TTTTACAATC   2340

CTGCGAAATC TTTGATTTCT TGTGCTGACA TTGAAGAGTC GCAACGGACG TTGATTTGTC   2400

CATCTGTAAT ATGAACAAAA CCTGGTACAG TTGGGATTCC ATAGCGTGAG CGGAATGCTT   2460

GCAAATCATT GAGTTGGCTT GGTTCTTCAC TATTGATGAA GTAAATGTGA GCTTTGGTTT   2520

CAGCTACGAC ACCTGACAAT GTACCTGCAA ATTTACGGCA GTAAGGGCAA GTTTTGCGAC   2580
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855

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CGATAAAGAA GGTTGCAGTT TCTTTTTTAT CAAGAGCTTC TTGCGCACGC ACAACTGTAG     2640

TGACTTCAAG GTCTTTGATG TTATCTAAAA ATTGTTCCAT GAGATTACCT CGCTTTCATT     2700

GATAAGTCTA GTATGCCATA AAGTTTCTAA AATTGCTTAG ATTTGATACG AAAAAAGATG     2760

AGGTTGGTTG GTCTCATCTT TTATAGGTCT TTATTTTACA AATGCATTGA TTTCTGCTTC     2820

GATGTTAGCA ATCTTAGCTT GTGATTCTTC GTTGGTTTCC CCTACAACTG CAATGTAGAA     2880

CTTGATTTTT GGTTCTGTAC CTGAAGGGCG AACGGCAATC CATGAACCGT CAGCAAGTGT     2940

GTATTTCAAC ACATCACTTG GAGGAGTTGT CAAGTTTGTA ACAGTACCGT CAGCAACAGT     3000

AGCAGTTTGT GCCTTGAAGT CTTCTACGAC AGTGATAGCT GTTGCGTTCC ATTCTGTTGG     3060

AGCATTGTTG CGGAATTTAG CCATAATCGC TTTGATTTGT TCAGCACCAT CGACACCTGA     3120

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AACGGCTTGG ATGGCATCTT TATCACGTAC AAATGGTTTA ATCAAGTAAC CGAAGCTTTC     3300

TTCAAATCCC ATCATGTAAG TGTGGTTGTG TTTTTCTTCG AATTCTTGGA TTTTTTTCAGC    3360

GATAAATTTG AAACCTGTCA AGACGTTGAA CATAGTTGCG CCGTAGCTTT CAGCAATCTT     3420

CGTTACCAAG TCAGTTGAAA CGATAGATTT GCAGAGAGCG GCATTTTCAG GAAGAGTTCC     3480

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AAGGTTGAGG TAGCTACCAT CTTTTTGAAG AACTTCAACA CCAACACGGT CAGCGTCTGG     3600

GTCAGTTGCG ACAAGAACAT CTGCACCAAC TTGACGACCA AGTTCTTCAG CAAGGGCAAA     3660

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TTCGCCGATA ACTTCAATCA AGCCAGAAGC TTTTTCAGTT TCCACATCAG CAACTTCAAC     3960

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AGTCGGACGA AGGCTTTCAA ATACGTAAGA TTTGATGCCG TGTTTAGCAA GAACTGCCGC     4200

AGATTCAAAG GCAAACTCAG GTGAGAAGTG ACGGCTATCG TAGGCAATTG CTACACCGCG     4260

TTCTTTCTCG TTTCCACCTT TTGACTCAAT CAAACGAGCC AATCCTTCAG TAGCTTGGCG     4320
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856

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AACAACGTAG ATGTTGATAC GGTTTGTACC AGCACCAACC AAGCCACGCA TACCTGCAGT    4380

ACCAAATTCA AGATTTGTAT AGAAGGCATC TTCCTTAGTT TTTTCGTCCA TATTTTCCAA    4440

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GTAAGACATT CAAATTCTCC TTTATTTTTA AAACATTTAA TCAGTTTAAT TATATCATTT    4560

TTTTTAGTTT TAGTAAAACC TTATCTGCTT CGAACATCTC TTCAAACCAG GTCAGATTGA    4620

ATTTTGGGGT TATATGATGT TGAGGCTAGG AAAAATTCAA TTTCAGTAAA AAAAGTAAGT    4680

CTTCTCATAA CAAAACATTG ATATAGTTAC TTAGTTTTAA ACAAGCATAT TATAATAAAG    4740

CTATGGCATA TAGTACTGAT TTTAAACAGC GAGCATTAGA TTACATCAAA GAGGGGCACA    4800

GCCATGTCGA GGCAGCCAAG TTTTTTGGTG TTGGCGTCAG AACTCTCTTC ACGTGGGAAA    4860

AGAAAGACGT GAACAAGAAC ACATAGAGAG GAAAAAGCGA GTCGTCAAAA ACCGAAAGAT    4920

TCCTTTAGAG GAATTGAAAG CCTTTGTAGA GGCTCATCCA GATGCTTTTT TACGGGAAAT    4980

TGCGGCACAT TTTGATTGTG CTGTTCCTTC AGTATGGGCA GCTTTAAAGC AGATTAAGGT    5040

CACTTTAAAA AAAGATGACG AGCTTTAAGG AACAAGACCC AGAAAAGTAG CCTTATTTCT    5100

TAAGAATTTT AATAGTTTAA AGCACCTAGC ACCTGTTTAT ATTGATGAAA CAGGAATCGA    5160

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TGTCTTGAAA CAGGTTGATA AAGATACTCC TAATACCCCA ACTTGGCTAA ACTCAGCTGC    6120
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857

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TTCTAAAGCT AAAGATGATG ACAGAGTATA TAAACTACTG AAGACTCTTA TACCAGGAGA    6180

AAATTACCTA TCATGTTAAG GATAATCAGC TAGAAGTAGA AACAGATAAA TACACATATA    6240

CTGCCGCTAG AAATGGTAGT AAGGAAGTTG GTATTCAAGA GTCAGATATA GCAGCAACTC    6300

TAAGTGCCGA TGAATATAAT TCTAATCGCC AAACTTTTGA GAGAGAATAC AAATACAAAA    6360

GCAAATGCCC TTAATAATGG TTGGGCTAGA TCTGGTTCTG AAGAGTTCAA AAAGTTCTCC    6420

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CAGAAGACGG TGCAACAGTT GACTATTACT ACCGTGAGAA TGTTGAGGAA ACAGTGGTTC    7380

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AAACTGAGAA CAAGGTCACG GGAGTTGTAA CCTACGGTGA ATGGACAACA GGAAACTGGG    7560

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CACAAGAAGT TACGTCAGAC TCTAGTGATA AAGAAATAAC GGTAAGGTAT GACCGTTTAT    7680

CAACACCAGA AAAACCAATC CCACAACCAA ATCCAGAGCA TCCAAGTGTT CCGACACCAA    7740

ACCCAGAACT ACCAAATCAA GAGACTCCAA CACCAGATAA ACCAACTCCA GAACCAGGTA    7800

CTCCAAAAAC TGAAACTCCA GTGAATCCAG ACCCAGAAGT TCCGACTTAT GAGACAGGTA    7860
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858

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AGAGAGAGGA ATTGCCAAAC ACAGGTACAG AAGCTAATGC TACCTTGGCT AGTGCTGGTA    7920

TCATGACCTT GTTAGCTGGT CTAGGATTAG GATTTTTCAA GAAAAAAGAA GATGAAAAAT    7980

AATAGATTTT AGAATCTAGG AACCAGGAAA AGCTCACAGA TGTGGGCTTT TTTCCTGGTT    8040

TTGAGAACGA GGTCTTTCGT AAAGAATAAA AACGCTTACA AGTCTGTTGA ACTGGGAAAC    8100

TATGAATCCT ATTTTTTTAA AAATATTTCC AGAAATCAGT TGCGG                    8145
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(2) INFORMATION FOR SEQ ID NO: 123:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8697 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

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CGGTACCGGG AACGATACTT AGTCTAATTT TGCACCTTTT CCATGTATGG TAAAGGTTTT     60

TCTTTTTTTA AAAAGGAAAA CGAGAAGAGG AGGTTCTTAT GAAAGCAAGC ATTGCCTTGC    120

AAGTTTTACC CCTAGTACAG GGGATTGATC GGATAGCTGT TATTGATCAG GTCATTGCTT    180

ATCTGCAwAC TCAAGAAGTG ACGATGGTAG TGACACCATT TGAAACGGTC TTGGAAGGGG    240

AGTTTGATGA GCTTATGCGC ATTCTAAAAG AAGCGCTGGA AGTGGCAGGG CAGGAGGCAG    300

ACAATGTCTT TGCCAATGTC AAAATAAATG TAGGAGAGAT TTTAAGTATT GATGAGAAAC    360

TTGAGAAGTA TACTGAGACG ACACATTAGT CTATTGGGCT TTCTCGGAGT ATTGTCAATC    420

TGGCAGTTAG CAGGTTTTCT TAAACTTCTC CCCAAGTTTA TCCTGCCGAC ACCTCTTGAA    480

ATTCTCCAGC CCTTTGTTCG TGACAGAGAA TTTCTCTGGC ACCATAGCTG GGCGACCTTG    540

AGAGTGGCTT TACTGGGGCT GATTTTGGGA GTTTTGATTG CCTGTCTTAT GGCTGTGCTC    600

ATGGATAGTT TGACTTGGCT CAATGACCTG ATTTACCCTA TGATGGTGGT CATTCAGACC    660

ATTCCGACCA TTGCCATAGC TCCTATCCTG GTCTTGTGGC TAGGTTATGG GATTTTGCCC    720

AAGATTGTCT TGATTATCTT AACGACAACC TTTCCCATCA TCGTTAGTAT TTTGGACGGT    780

TTTAGGCATT GCGACAAGGA TATGCTGACC TTGTTTAGTC TGATGCGGGC CAAGCCTTGG    840

CAAATCCTGT GGCATTTTAA AATCCCAGTT AGCCTGCCTT ACTTTTATGC AGGTCTGAGG    900

GTCAGTGTCT CCTACGCCTT TATCACAACT GTGGTATCTG AGTGGTTGGG AGGTTTTGAA    960

GGTCTTGGTG TTTATATGAT TCAGTCTAAA AAACTGTTTC AGTATGATAC CATGTTTGCC   1020

ATTATTATTC TGGTGTCGAT TATCAGTCTT TTGGGTATGA AGCTGGTCGA TATCAGTGAA   1080

AAATATGTGA TTAAATGGAA ACGTTCGTAG AATTAGAATG TTTCTGAAAA AGAAAAGAGG   1140
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859

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AAATCAAAAT GAAGAAAACA TGGAAAGTGT TTTTAACGCT TGTAACAGCT CTTGTAGCTG   1200

TTGTGCTTGT GGCCTGTGGT CAAGGAACTG CTTCTAAAGA CAACAAAGAG GCAGAACTTA   1260

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CCAAGGAAAA AGGTTATTTC AAAGAAGCTG GAGTGGATGT TGATTTGAAA TTGCCACCAG   1380

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ACTACATGGC TAAGAAATTG GAAAAAGGAG CAGGAATCAC TGCCGTTGCA GCTATTGTTG   1500

AACACAATAC ATCAGGAATC ATCTCTCGTA AATCTGATAA TGTAAGCAGT CCAAAAGACT   1560

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TCAAGGAGTT TGACTACTAT TCACCAGTTA TCATCGCAAA CAACGACTAT CTGAAAGATA   1860

ACAAAGAAGA AGCTCGCAAA GTCATCCAAG CCATCAAAAA AGGCTACCAA TATGCCATGG   1920

AACATCCAGA AGAAGCTGCA GATATTCTCA TCAAGAATGC ACCTGAACTC AAGGAAAAAC   1980

GTGACTTTGT CATCGAATCT CAAAAATACT TGTCAAAAGA ATACGCAAGC GACAAGGAAA   2040

AATGGGGTCA ATTTGACGCA GCTCGCTGGA ATGCTTTCTA CAAATGGGAT AAAGAAAATG   2100

GTATCCTTAA AGAAGACTTG ACAGACAAAG GCTTCACCAA CGAATTTGTG AAATAATGAC   2160

AGAAATTAGA CTAGAGCACG TCAGTTATGC CTATGGTCAG GAGAGGATTT TAGAGGATAT   2220

CAACCTACAG GTGACTTCAG GCGAAGTGGT TTCCATCCTA GGCCCAAGTG GTGTTGGAAA   2280

GACCACCCTC TTTAATCTAA TCGCTGGGAT TTTAGAAGTT CAGTCAGGGA GAATTGTCCT   2340

TGATGGTGAA GAAAATCCCA AGGGGCGCGT GAGTTATATG TTGCAAAAGG ATCTGCTCTT   2400

GGAGCACAAG ACGGTGCTTG GAAATATCAT TCTGCCCCTC TTGATTCAAA AGGTGGATAA   2460

GGCAGAAGCT ATTTCCCGAG CGGATAAAAT TCTTGCGACC TTCCAGCTGA CAGCTGTAAG   2520

AGACAAGTAT CCTCATGAAC TTAGCGGTGG GATGCGCCAG CGTGTAGCCT TACTCCGGAC   2580

CTACCTTTTT GGGCACAAGC TCTTTCTCTT AGATGAGGCC TTTAGCGCCT TGGATGAGAT   2640

GACAAAGATG GAACTCCACG CTTGGTATCT TGAGATTCAC AAGCAGTTGC AGCTAACAAC   2700

CCTGATCATC ACGCATAGTA TTGAGGAGGC CCTCAATCTC AGCGACCGTA TCTATATCTT   2760

GAAAAATCGC CCTGGGCAGA TTGTTTCAGA AATTAAACTA GATTGGTCTG AAGATGAGGA   2820

CAAGGAAGTC CAAAAGATTG CCTACAAACG TCAAATTTTG GCGGAATTAG GCTTAGATAA   2880
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860

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GTAGAAAAAT AGGGAGTTGG TGAAGATTAT CCTTTACCAG CGCCCTTTTT CTTTTAAAAA        2940

TGAGAAAATT TCGGTATAAT AGTCAAACAA GGTCAAGGTT TAAAGAGAGA GGTGGGTTTG        3000

TTATGAGATT TAAAAATACA TCGGATCATA TTGAGGCCTA CATCAAGGCG ATTTTAGATC        3060

AATCTGGTAT CGTGGAGTTG CAACGGAGTC AGTTGGCAGA TACCTTTCAG GTTGTTCCTA        3120

GTCAGATTAA CTACGTGATC AAGACACGCT TTACGGAAAG TAGAGGCTAC TTGGTTGAAA        3180

GTAAGCGTGG TGGCGGAGGC TACATTCGTA TAGGACGGAT TGAGTTTTCT AGTCATCATG        3240

AAATGCTCCG GGAGCTGCTT TACTCGATTG GTGAGCGAGT CAGTCAAGAA ATTTATGAGG        3300

ATATTCTCCA GCTTTTGGTT GAGCAGGAAT TGATGACCAA GCAGGAGATG AATTTGCTAG        3360

AATCAGTAGC TTTGGATCGC GTTTTAGGAG AAGAAGCTCC AGTTGTTCGA GCAAACATGC        3420

TACGTCAGAT CATACAAGAG GTAGATAGAA AAGGGAAGTA AGATGAACTA TTCAAAAGCA        3480

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GAGTCGTGGC ACTTGTTGAT TGCCATGTCT AATCACAGTT ATAGTGTAGC AGGGGCAACT        3600

TTAAATGATT ATCCGTATGA GATGGACCGT TTAGAAGAGG TGGCTTTGCA ACTGACTGAA        3660

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CTTTTTGATG AAGCAGAGTA TGTAGCGTCA GTGGTCCATG CTAAGGTACT AGGGACAGAG        3780

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ACAGTAGCTG ACAAGCAAAA TTCTATGGCC AATATGATGG GCATGCCGCA GACTCCTAGT        4020

GGTGGTCTCG AGGATTATAC GCATGATTTG ACAGAGCAAG CGCGTTCTGG CAAGTTAGAA        4080

CCAGTCATCG GTCGGGACAA GGAAATCTCA CGTATGATTC AAATCTTGAG CCGGAAGACT        4140

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CTCCACACCA TCATGGGTTC TGGTAGCGGG ATTGATTCGA CTCTGGATGC GGCCAATATC        4440

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GAAGAACCAA GTGTGGCAGA TAGTATGACT ATTTTACAAG GTTTGAAGGC GACTTATGAG        4620

AAACATCACC GTGTACAAAT CACAGATGAA GCGGTTGAAA CAGCGGTTAA GATGGCTCAT        4680
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861

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CGTTATTTAA CCAGTCGTCA CTTGCCAGAC TCTGCTATCG ATCTCTTGGA TGAGGCGGCA      4740

GCAACAGTGC AAAATAAGGC AAAGCATGTA AAAGCAGACG ATTCAGATTT GAGTCCAGCT      4800

GACAAGGCCC TGATGGATGG CAAGTGGAAA CAGGCAGCCC AGCTAATCGC AAAAGAAGAG      4860

GAAGTACCTG TCTACAAAGA CTTGGTGACA GAGTCTGATA TTTTGACCAC CTTGAGTCGC      4920

TTGTCAGGAA TCCCAGTTCA AAAACTGACT CAAACGGATG CTAAGAAGTA TTTAAATCTT      4980

GAAGCAGAAC TCCATAAACG GGTTATCGGT CAAGATCAAG CTGTTTCAAG CATTAGCCGT      5040

GCCATTCGCC GCAACCAGTC AGGGATTCGC AGTCATAAGC GTCCGATTGG TTCCTTTATG      5100

TTCCTAGGGC CTACAGGTGT CGGGAAAACT GAATTAGCCA AGGCTCTGGC AGAAGTTCTT      5160

TTTGACGACG AATCAGCCCT TATCCGCTTT GATATGAGTG AGTATATGGA GAAATTTGCA      5220

GCTAGTCGTC TCAACGGAGC TCCTCCAGGC TATGTAGGAT ATGAAGAAGG TGGGGAGTTG      5280

ACAGAGAAGG TTCGCAATAA ACCCTATTCC GTTCTCCTCT TTGATGAGGT AGAGAAGGCC      5340

CACCCAGATA TCTTTAATGT TCTCTTGCAG GTTCTGGATG ACGGTGTCTT GACAGATAGC      5400

AAGGGACGCA AGGTCGATTT TTCAAATACC ATTATCATTA TGACATCGAA TCTAGGTGCG      5460

ACTGCCCTTC GTGATGATAA GACTGTTGGT TTTGGGGCTA AGGATATTCG TTTTGACCAG      5520

GAAAATATGG AAAAACGCAT GTTTGAAGAA CTGAAAAAAG CTTATAGACC GGAATTCATC      5580

AACCGTATTG ATGAGAAGGT GGTCTTCCAT AGCCTATCTA GTGATCATAT GCAGGAAGTG      5640

GTGAAGATTA TGGTCAAGCC TTTAGTGGCA AGTTTGACTG AAAAAGGCAT TGACTTGAAA      5700

TTACAAGCTT CAGCTCTGAA ATTGTTAGCA AATCAAGGAT ATGACCCAGA GATGGGAGCT      5760

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AATTCAATGA AAATCAAAGA GCAAACTAGG CAGCTAGCCG CAGGTTGCTC AAAACACTGG      6000

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TTACCCTCCG TCGTATTTGT CTTAGAGCGT GTGTAGTAGA AAAAGAGCAG TCTTATCTGA      6180

AATTTTTATT CTTTCAAAAG AGACCTGTTT CTTTTTTGCA TGTCAAATCC GTTCTAGCTG      6240

GTATTTGAAA AATCAAACTA ATATTCAATG AAAATCAAAG AACAAACTAG GAAGCTAGCC      6300

GCAGGTTGCT CAAAACACTG TTTTGAGGTT GTAGATAGAG CTGACGTGGT TTGAAGAGAT      6360

TTTCGAAGAG TATAAGCTGC AAGATGAATG ATTTTCTTGT ATTGACGTTG TTGTTGACAA      6420
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862

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AAAGTAGCGG ATAAATGAAA TCCATTCCAT TATCATAGAT GATAGGCTGG TAGGAAATTT    6480

TCAAATAGCA TACAGGAAAT AGATGTATGG AGTTCTGGTA GTAGAAAGGG AGAGAGATGA    6540

ACATTTTAGT TGCAGATGAC GAGGAAATGA TTAGAGAAGG AATTGCAGCA TTTCTGACAG    6600

AAGAGGGTTA TCATGTCATT ATGGCTAAGG ATGGACAAGA GGTCTTGGAA AAATTTCAAG    6660

ATCTCCCTAT CCATCTCATG GTACTGGATT TAATGATGCC TAGGAAGAGT GGTTTTGAAG    6720

TGTTAAAAGA AATCAATCAA AAGCACGATA TTCCTGTCAT CGTCTTGAGT GCTCTGGGAG    6780

ATGAAACTAC TCAGTCACAG GTATTTGATC TCTATGCTGA TGATCATGTG ACAAAACCTT    6840

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AGGATCTTTG GCGATATCAG GATGTAACAG TGGATTTTAC CTCTTACAAA GCACATTATA    6960

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TAGATTGTAT CGTGACTGTG AAAAATGTTG GGTATAAGAT TAGCTTATGA TAAAAAATCC    7200

TAAATTATTA ACCAAGTCTT TTTTAAGAAG TTTTGCAATT CTAGGTGGTG TTGGTCTAGT    7260

CATTCATATA GCTATTTATT TGACCTTTCC TTTTTATTAT ATTCAACTGG AGGGGGAAAA    7320

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TCCAAGCTTA CTCCAGTCTT ATTCAAAGTC CTTGACCATA TCTGCTCACC TTAAAAGAGA    7440

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AAATTATATC GTGATGTTAG ATATGTCTGT TAGTACAGCA GATGGTAAAC AGGTAACCGT    7560

GCAATTTGTT CACGGGGTGG ATGTCTACAA AGAAGCAAAG AATATTTTGC TTTTGTATCT    7620

CCCATATACA TTTTTGGTTA CAATTGCTTT TTCCTTTGTT TTTTCTTATT TTTATACTAA    7680

ACGCTTGCTC AATCCTCTTT TTTACATTTC AGAAGTGACT AGTAAAATGC AAGATTTGGA    7740

TGACAATATT CGTTTTGATG AAAGTAGGAA AGATGAAGTT GGTGAAGTTG GAAAACAGAT    7800

TAATGGTATG TATGAGCACT TGTTGAAGGT TATTTATGAG TTGGAAAGTC GTAATGAGCA    7860

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CAAAGATCAT CCAAAATATA TTGCAAAGAG TATAAATAAG ATTGACCAGA TGAGCCACTT    8040

ATTAGAAGAA GTACTGGAGT CTTCTAAATT CCAAGAGTGG ACAGAGTGTC GTGAGACCTT    8100

GACTGTTAAG CCAGTTTTAG TAGATATTTT ATCACGTTAT CAAGAATTAG CTCATTCAAT    8160

AGGTGTTACA ATTGAAAATC AATTGACAGA TGCTACCAGG GTCGTCATGA GTCTTAGGGC    8220
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863

ATTGGATAAG GTTTTGACAA ACCTGATTAG TAATGCAATT AAATATTCAG ATAAAAATGG   8280

GCGTGTAATC ATATCCGAGC AAGATGGCTA TCTCTCTATC AAAAATACAT GTGCGCCTCT   8340

AAGTGACCAA GAACTAGAAC ATTTATTTGA TATATTCTAT CATTCTCAAA TCGTGACAGA   8400

TAAGGATGAA AGTTCCGGTT TGGGTCTTTA CATTGTGAAT AATATTTTAG AAAGCTATCA   8460

AATGGATTAT AGTTTTCTCC CTTATGAACA CGGTATGGAA TTTAAGATTA GCTTGTAGAC   8520

AGATTAGTTT TTTATTAAAG TTCATATAGG GTTAACATAA GTGTGTTATT CTTTGTGTAG   8580

ATAAAAGAAA GGATACTAAT ATGGTATTAG CGATTATTTT AGTAACATTC TTTATTCGAT   8640

TGATTTTTTT AAAGCGTTCG ATAGAGAATG AGAAACGAAT CCTTAGCAAT GGCGGGG   8697

(2) INFORMATION FOR SEQ ID NO: 124:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4317 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

AACCATACAT ACGGCAAGGC AAAGCTGACG CGGTTTGAAG AGATTTTCGA AGAGTATTAG   60

TTGCCTTTAA AGGCATCCAC CATCGTTTGA AATTCTTCAT TTGAGAGAGT AATCCCTTTG   120

CCCATTTTAG TATGGTCTGG ACTCCAAGCA CGAATATCAA ACTTTGCAGG GGCACCATTA   180

AAGCTCACAC GGTTAATTTC CTTGGTCCAA CCTTTTTCGT TTTCAGAAAG AGTCAACAAG   240

TGCTCTTCGA TTTCAAATGT AAATTCTGCC ATTTTCTTCT CCTTTTTTAG TTTCATTAGT   300

TTATTCGTAA AATCTTGTAG ATTTTAGGAA AATTTTATAT AATATTGATA TAAAAGAAGG   360

GAGGCCAATA TGAGACATAA ATTCCAGCAA GTTCTAAATA AAATACATGA TTTTTTAAAT   420

GGATATGACC AACCTGACCA GACTGAAACC AACTCCCTTA CAGCCACTAT TGAAGAGGCT   480

ATCCAGAAAC AAACCGCTGT TCACCTTATC TTGTCTGAGA CAAGCTTTAC AGGTGACATC   540

ATCAAATATG ATCAGCAAGG CCAGCAAATT ATCGTGAAAA ATTTTTCCAA AAATGTGAGC   600

CGGATTATCC GTATAAGCGA TATTCAACGC CTGCGATTTG TCCCCTCAAC TGTCCAAACA   660

GCCCAAAAAA ATAGATTTAA GAAAGAGTGA GATGTAGTTG CTTCATCCCA CTCTTTTTTC   720

TTAGCGAATT TGTTCAAAAT GTAAATGAAC TGCGATATGA TCTCCATAAC CACTTCTTTC   780

CAAGTCACGT TGTAAACGAT AGGAAATGTA GTGTTCTGCA ATGGTAATGT AACCTGCGCC   840

CAATAAACGA TGTTCAACCA TAGATTGAAT CATACTGATA GTCGCACGTT CCACCTTGGC   900

864

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TTCTTGTAAA TCCAAAACTA CCTTCTTAGT GACTTGAGCA AGATTTTGAC GCAAATCATC      960

TGTCAAAACA TAAACAGTTT GGGCTGCCTT CAAGATGGCT TGGTAAATCT TATCTGGATT     1020

AAATTCAGCA ATTTCGCCAT TACGTTTGAT TACTTGCATA GGTTTCTCCT TTATTCTTTG     1080

TTTTCTTTGA TTTCTGCCAG CATTTTTTCT TCTTCTACTG TCAGTTGATA ATGTTCAAGT     1140

AAATCCGGTC TGCGCTCGTA GGTTTTCTTT AAACTCTCGT ACAATCGCCA CTGACGAATC     1200

TTTTCATGGT GGCCACTCAT CAATACATCT GGCACGACCA TGCCTCGATA ATCATAGGGA     1260

CGTGTGTACT GAGGATATTC TAAAAGACCT GAAGAAAAAC TATCATCTTG GTGGCTAGAC     1320

TCCTTGCCAA TCACTTCTGG AATCAGGCGA ACTGTAGCAT CAATCATGGT CATAGCTGCC     1380

AATTCTCCAC CAGTGAGGAC ATAGTCACCT AGGGAAATCT CATCTGTTAC CAAGGTCTTA     1440

ATGCGCTCAT CATAACCCTC ATAGTGCCCA CAGATAAAGA TTAGCTCTTC CTCTTGAGCC     1500

AAATCTTCAG CATAAGCCTG ATCAAACTGC TTTCCAGCAG GATCAAGGAG AATAACGCGC     1560

GGATTTTTCT TTTCAATAGC ATCAAAGGAA TCGAAAATAG GTTGTGCTCT GAGCAACATG     1620

CCCTGACCGC CTCCGTAGGG CTCATCATCT ACATGACGGG CCTTTTCAGC ATTTTCTCGA     1680

AAATTATGAT ACTGGATATC CAAGAGCCCT TTTTCTCGAG CCTTTCCAAC GATTGAGTGC     1740

TCCAGTGGAG AAAACATCTC TGGAAAGAGG GTTAAAATAT CAATCTTCAT CGTCTAACCC     1800

TTCTAAGATT TCCACATCGA CCCGTTTACT TGGAATATCA ACATTGAGAA CCACTGGTGG     1860

GATATAAGGT AAAAGCAAAT CACGTTTGCC TTTTCGTTTG ACCACCCAGA CATCATTAGC     1920

ACCTGGTTGC AGGATTTCCT TGATGGTTCC AACCAAGCTA TCACCCTCAT AGACTTCCAA     1980

ACCGATAATC TCGTGATAGT AAAATTCACC ATCGTCTAGG TCATTCAAAT CTTCCTCAGC     2040

GACCTTGAGA CTGTATCCCT TGTACTTTTC GATAGTATTG ATATGGTACA TATCTTTGAA     2100

TTTAATAATG TCAAAGTTCT TCTGTTTACG GTGGCTAGCG ATGGTCACTG TTTGGACAAA     2160

CTGATCTTTT TCATCAAACA AAACCAGCTC AGCTCCTTTT TTAAACCGTT CTTCTGCAAA     2220

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ATAAGGCTGA CAAAAAACAA ATACAGGAAT ATGAGCTTCT ATAGATACAT CCTCAAAATC     2520

TTCCTCAGTA ATCTCTCCAG ATATCTGAAA TTCTGGATCT TGATTTTCCA ACTCTAAGCC     2580

TTTTTCTTGC ATTAATTCCC AGATTTTTTT ATTCGTTTCA GGACTAAATG TTGCTTGAGT     2640

TAAGTTCTTA AAATAAAGTT CAGGACCACA CTCGTCAATC AGCCTCATCT GCTCTTCCAT     2700
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865

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TTCTGGATAA GGATTTTCTG AAAAATCAGC AAACATGACT TTTTTAGTTG TCGGTTCAAT       2760

TGCTACTAAA GTCTGACGCT TAATTGGTTT CTCGAGTAAT TTGCAAGCTA AAATTCCACT       2820

CCAACTATGT GCACAAAGTA TATATTCAGA AATTCCTAAT TCTTCAAGTA CTTCATAAAC       2880

CGCATCTGCA AGATTATCTA GATTTTTTCC AGCTTGGTCA TGAATCGGAC TCCTACCTGT       2940

GTTCGGAAAA TCAATTGTCA AATAACCAAT TGTAGGAGGA GGTTTTTCAA GTATAAGTGA       3000

AAAATTTTCA TAACTTGGTA GCAAACCTGC TCCGTTTAAA CAAACTAGCA CTTTCTTTTG       3060

CTTTTGATAA GTAACAGAGA GGCTACCAAT TTCTGTAGAT ACTTCAAACC TCTTCATAAA       3120

GAAATCCACT GATTCTATAT AATGAATTAT TAAAAATCCT TATCCTTTAT TTTATCACGT       3180

TCCAAGGATT TTCTCAAGTT GGAGGAAGGG GACAATATCT CTACTTTCCC TTCAATAATC       3240

CTTCCAAATT ATGTTTATGT TGGTAATTAA TGGCTGCGGT TTTGTCTTTC TCAAAGACAG       3300

TCTTGGTAAG GTCAATATGA TTAATAGCTA CGATTGCGAC GGTGTAGTAA ATGATATCAG       3360

CCAGTTCTCT GGCAAGTTCC TCGTTCGAAT CCTATCCCTT CTTTTCGACC AGAGCGCCTA       3420

TTCAAAACCT CGACTACTTC TCCGACTTCC TCCACTAACT TCATAAAGAG ACCTTCATCA       3480

GTCCGAGACT GCTGTTAATG TTCGATTAAG TAGTCTTGGA ATTGCCTAAA CGTTCAATCT       3540

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ATTTGACTGT CCTGATCGAT TTGTCCTGTT CTTGTTTCAT TTTACTATAT CTTCTATTCC       3660

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CTTACGACCG ATTACACGAC CCACATCGCT TTGATCAAGA TTCAAATGAT ATTCCAAAAA       3840

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AATCGCAATA ATGAGATTTT CAATCGTATC CATCTGTCAA CCTACTTTAA ACTTATTTTG       3960

AAAATTTAGA ATCGTGGAAT TTTTTCAATA CGCCTTCTTT TGAAAGGATG TTACGTACTG       4020

TGTCTGAAGG TTGAGCTCCA TTAGCCAACC ATGCAAGAAC GCGGTCTTCT TTCAAAGTTA       4080

CTTGGTTTTC AGCAACAAGT GGGTTGTAAG TTCCAACTGT TTCGATGAAA CGTCCGTCAC       4140

GTGGTGAACG TGAATCTGCT ACGTTGATAC GGTAGAAAGG TTTTTTCTTA GAACCCATAC       4200

GAGTCAAACG GATTTTAACT GCCATTTTTA AAGTCTCATT TCTTTAATTT TTTATTTCGG       4260

TGAAATAGCT GAGCTATTTA GCACATGTTC TATTATAGCA GATTTCTGGC ATGTGTC         4317
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(2) INFORMATION FOR SEQ ID NO: 125:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 4881 base pairs

866
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

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AATTTATTTG ACTGGAAATT GTAGAGGGTT CTCGAAATTT CTTGAATGGT TAAAATAAGG        60

ACAAGAGAAA ACATGGATAT CTATATCCTT GTGCCAAAAA AACCACTGCC CTCCCCAGAC       120

CAACCTGAGG AAAGCAGTGA TTCTTATTTT AGGAGTTAGG AATGAATACA CGAAATCAAT       180

TTAGCTGATT ATTTTTTGTT TTTCAAGAAT TCATCGTATT GTTTTTGCAT TTCGTTCAAT       240

ACTTTTTCGT AGGCACCTTC AGATTTCAAT TTTTCCATCA ATTCTGGAAT CGCTTTATCT       300

GGGTCTACAG TACCAGTGTT GATAGCTGTA TCAAATTGTT GCATTGTGTT AGCAATAGCT       360

GAGATTTCAG ATTTCACATT GTCAGTATTG AAGATAAATC CAAGCGCTGG AGATTCTTTA       420

GCTTCTGCCA ATTCTTTCTT AGAATTTTCG ATTTGTTGGT CTGTAACGTT TTCGTTGATG       480

TAAAGGATCC AGTTGTTACC AGTGTTCCAT CCACCCATGT GAGTGTTTCC TTTGTAGCCA       540

TCAAGAACGC GAACACGGTT TTCTTTACCT TCAATTTTTT CCCAGTTCTT GCCTTCTGGA       600

CCGTAAACAA GACCGTTCAA GAGTTCTGGG TTCGTATTCA AGAGGTTCAA GATTTCCATT       660

GATTTTTCTT TGTTCTTAGA GTTGTTTGAG ATGACAAAGT TAGCAACTTG TGTTGTTTGG       720

TTTTTCTTGA TGAAGTTAGT AATTGGTTTG ATTTGGATAT CTTTGTTGGC AACACGTGAA       780

AGCAAGCTGT TACCGTAGTC AGCTGGTCCT ACTGTTTCTT CACGAACGAA CCAAGTATCT       840

TGTTGAAGGT CAAAGGAAGT ATCGCTTGTT GCGACGTCTT TTGGAATGTA GCCAGCTTCA       900

TAGAATTTGT GAAGAGTCTT CAAGTGTTCT TTGAAACGAG GCACTTCGTA ACGGTTTACA       960

ACTTTAGTAG TATCGCCTTC AAGGTCGATA ACGAATGGAA GACCGTTTGC TACTGGGTAG      1020

TCAAAATTAT CAGATGGGAT GAAAACTTTA CCAATAGCAA ATGGTACTAC GTCTGGAGCT      1080

TTTTCTTTGA TTTGTTTCAA GACTGGCTCA AGAGTTTCGT AAGAAGTAAC ACCTGAAATA      1140

TCGATACCAT ATTTAGCAAG GAGAGTTCCG TTGAAGGCAA AGTTTTGAGA TGATGCAACG      1200

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GGGTCAAGTG CTTTGTAAAG GTCTTTACCT TCTTTTTTGT ACAATTCTGT CAAGTCAGCG      1320

TAAGCACCTT TTTGAGCATT TACAATATAG TTATCTGCAA AGGCAATATC ATAGTTTTCA      1380

CCAGATGATG TGATAACTGA CATTTTCTTA CCATAGTCAC CCCAGCCAAG GTATTGGATA      1440

TCCAATTTGG CACCAACTTT TTCTTCAATG ATTTTGTTGG CATTTGCTAA CAATTCATCC      1500

AAGTTGTCTG GTTTGTCACC GATTTGGTAC ATTTTGATAA CAGGTTTGTC ACCTGAATCA      1560
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GCAGCTTTTT TGCTGTTACC TGTCAAATTT CCACAAGCAG CAAGACCTGC AGCCAGAGCG    1620

ACTACACTAG CAGATGCAAA AGCATATTTT TTCCAGTTTT TCATGATAAA AACTCCTTTT    1680

TTTATTTTTA AACTTATAAA CAATGTAATG ATCTTATACT CAATAAAAAT CAAAGAGCAA    1740

ACTAGAAAAC TAGCCGCAGG CTGCTCAAAG CACTGCTTTG AGGTTGTAGA TAAGACTGAC    1800

GAAGTCAGTT ACATATATCT ACGGCAAGGC GACGTTGACG CGGTTTGAAT TTGATTTTCG    1860

AAGAGTATTA ACTTCACACA AGGGAAGTTG GGAACTGAGA AATGTTATTT CTCAATAAGC    1920

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GGGCGTTGAA CCAGTCATTC CAGAAACCAA GAGCTGTTAA GAGCGTGATG GTTGCGATAC    2220

CTGGTAGTGA CAATGGCAAA CAGATTTGGA AGAAAATCCG GGCCTCACTG GCACCATCGA    2280

TACGAGCCGA TTCTAGAATG GCTTCTGGAA TGGTCTTCTT GAAGAAGGAA CGCATCAAGA    2340

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GAAGGACGAA GATGGTAAAG AATCTGCGAT ACTTAAAGGT TGTCCGTGAA ATAGCGTAGG    2520

CATAGGTTGT TGTGATAAAG ACATTTGTCA ATGTCCCAAC TACGGTTACA AAGACAGAGA    2580

TGAAGAGGGC TTGTAGGATT TTATCCTTAA ACTGTGCCAA AAACTCAAAA CCGTCTAAGC    2640

CAAATTGGGA TGGGAAGAAG CTATAGCCGT ATTGGAGGAG GCTTTTCTCG TCTGTCACTG    2700

AAATAATGAT AACGAATACA AAAGGTAGGA TACAAGAGAG GGCAATCAAA CCCGAAATGA    2760

TACTGAAGAA GATATCTGCT TTCTTACTGA AGGAGTGAAT GCCGACATTA TCAATTTTTT    2820

CTTTTTTAAT TTTCTTTTTT GCCATATTCT CCTCCTTTCT AGAACAAAGC TGAGTTTGGA    2880

TCGACTCGTC TTGCAAGCAA GTTTGATAGG ATAACCAGAA TCAAACCAAC AACGGATTGG    2940

TAAAGACCGG CTGCTGCAGC CATACCGATA TCTGCTGTCT GAGTCAAACC ATTAAAGACA    3000

TATACGTCCA AAACGTTGGT TACATTGTAA AGCTGACCAG CATTGTGTGG GATTTGATAG    3060

AAGAGACCGA AGTCTGCGCG GAAGATATTT CCGACTGCAA GGATGGTCAA TACAGTTACA    3120

AGCGGAGTCA ACTGAGGAAT GGTTACGTTG CGAATACGTT GCCACTTGCT AGCTCCGTCC    3180

ACTGTCGCTG CTTCGTAGTA GGTTGGATCA ATTCCCATGA TCGTCGCATA GTACATGACA    3240

CTGCTATATC CAAAGCCTTT CCAAATACCT AGGAAAAGTA GGAGATAGGG CCAGATGCCC    3300
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868

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AGGTCAGCGT AGAAATTGAC TTCTTTGAGA CCAAGACTTT CCAATAGATG ATTGAACACC    3360

CCTTTATCAA TATTTAGGAA GGCATCTGTA AAGAAACTGA TGATAACCCA AGACAAGAAG    3420

TAAGGGAACA ACATAGAAGT TTGAAAAATC TTCACCATTC TCTTAGAACG GAGCTCGCTG    3480

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TCAAATTAAT TTATAGAAAT ATTTTAGCAG CCAAGGTGTA CTGTTATAGA TTCAATACAC    4860

TATACTTGGT GGTTTAGCTC G                                              4881
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(2) INFORMATION FOR SEQ ID NO: 126:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13121 base pairs
        (B) TYPE: nucleic acid

869
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

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TATTCCCAAT TTTCTCATTA GGTATTGCCA AAGCAGAAAC GATTAAGATT GTTTCTGATA       120

CCGCCTATGC ACCTTTTGAG TTTAAAGATT CAGATCAAAC TTATAAAGGA ATTGATGTTG       180

ACATTATTAA CAAAGTCGCT GAGATTAAAG GCTGGAACAT TCAGATGTCC TATCCTGGAT       240

TTGACGCAGC AGTCAATGCG GTTCAAGCTG GGCAAGCCGA CGCTATCATG GCAGGGATGA       300

CAAAGACTAA AGAACGTGAA AAAGTCTTCA CCATGTCTGA TACTTACTAT GATACAAAAG       360

TTGTCATTGC TACTACAAAG TCACACAAAA TTAGCAAGTA CGACCAATTA ACTGGCAAAA       420

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AAGGAAGTAA ATACGAGCAC CTGGTTACTG AATTTAACCA AGCCTTGTCT GAAATGAAAA       720

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TTGATATGGA ATTGATTAAG GCAATCGCTA AAGACCAAGG TTTTGAAATT GAAATCACCA       960

ACCCTGGTTT TGATGCTGCT ATCAGTGCTG TCCAAGCTGG TCAAGCCGAT GGTATCATCG      1020

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TTAAAGCAAA CGGTGAATTC CAAAAGATTC TTGACAAATA CCTAGCTAGC GAATCTTCAA      1500

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         TCATCTCTGA GATTTTCGTT GACGTTATTC GTGGTATTCC ATTGATGATT CTTGCAGCCT      1740

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         GTATCTCTTA TGGAAAAACC ATGCGTAAGA TTATCTTGCC ACAAGCAACT AAATTGATGT      1980

         TGCCAAACTT TGTCAACCAA TTCGTTATCG CTCTTAAAGA TACAACTATC GTATCTGCTA      2040

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         CCTCAATCTT TTAGAAGAAG TCACTAGCGG TCACATCACT GTGAACGGCT ATGATTTAAC      2400

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         TTGCTAGCCA CTTCTACTAT CAAAGCCATG ATGTCAATGA TTCGGAACAT TATATTGCTT      3360
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871

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TCAGGTCCAG TTACTACTGG AACATCTACT CGTCGGCCCC ATTCAGCTAG CTGAGCTACT    5100
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872

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CCTGCATCAT ATGTAAGTCA TTAAGATTGT CTCCAAAAGC CATGACCTGA TCCATTGTGA      6900
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873

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874

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875

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TGGAAAGCAT TTGGGAATTC TTTAGACAGA GATTCTCAGT TTTAGCGGCA AATTTGGGTC     11880

AGGATAAAGA AAAAGCCCT ATTAAAGGCT TTTTAGGATG TTTACATCCA CCCTGAGGGA     11940

ATCGAACCCC CATCTCAAGA ACCGGAATCT TACGTGATAT CCATTACACT AAGGGTGGAA     12000

ACTTGTTTTA TTATAACAGA AATTTGCTCT AATAACAAGT TTTTTGGTCA AAGACCCCGT     12060

CTTAGTGGGA AGCATCCCCA TTCCAGATGG AGTTTTTCAC GATCACATAA TCAACGTGTT     12120

TAAGGTCAGC AACCTGACGT CCACCTGCAT AAGAAATAGC ACTTTGAAGG TCTTGTTCCA     12180
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876

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TCTCAGTTAA AGTGTCTTGC AGATGACCTT TAGCAGGAAG CAAGATACGT TTGCCTTCCA    12240

CATTTTTGTA AGCACCTTTT TGATATTGTG AGGCTGAACC ATAATATTCT TTGAACTGTT    12300

CACCATCGAC TTCAATCGTT TTCCCTGGAC TTTCAATGTG TCCTGCAAAG AGGGAACCAA    12360

TCATGATCAT GCTAGCACCG AAGCGGATAG ACTTAGCAAT ATCACCGTGA GTACGAATTC    12420

CTCCATCAGC GATAATCGGT TTACGCGCAG CCTTGGCACA CCAGCGTAGA GCAGCCAACT    12480

GCCAACCACC TGTACCAAAA CCAGTCTTAA CCTTGGTGAT ACAAACCTTA CCAGGACCGA    12540

TTCCGACCTT AGTAGCATCC GCACCAGCAT TTTCCAATTC ACGCACAGCT TCTGGTGTTC    12600

CCACATTTCC AGCAATGACA AAGGTATCTG GCAATTCTTT CTTGATGTGT TGAATCATAG    12660

AAATCACGCT ATCCGCATGA CCATGAGCAA TATCAATAGT GATATACTCA GGAGTATCAG    12720

CCTTGAGCTG GCTAACAAAA TCATACTCAT AATCCTTAAC ACCGACAGAG ATAGAAGCAA    12780

TGAGCCCTTG ATTGTGCATT CGTTTAATAA AAGGAATGCG TCCTGCCTCA TCAAAACGGT    12840

GCATAATGTA GAAGTAACCA CCTTTAGCCA GTTGCTCTGC TACATTTTCA TCCAAAATCG    12900

TCTGCATATT CGCTGGCACA ACAGGTAGTT TAAAGGTGTG ATTTCCTAAA GTGACACTTG    12960

TATCCGCTTC TGCACGGCTT TTAATGACAC ATTTATTTGG AATCAATTGA ATATCTTCGT    13020

AATCAAAAAT TGGAAATTCA TTTAACATAT CGATGTCTCG TTTCTTTTGT AATGACCTAC    13080

CTATGCTCTT GCATCACTAC GCCTTTTCCG ACGTTTCCTG G                        13121
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(2) INFORMATION FOR SEQ ID NO: 127:

     (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9578 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

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CCGAATGCAA TGTTTACGGT TGAACTTGAA AATGGACATC AGATTTTAGC AACAGTTTCT      60

GGTAAAATTC GTAAAAACTA TATTCGTATT TTAGCGGGAG ATCGTGTTAC TGTCGAAATG     120

AGTCCATATG ACTTGACACG TGGACGTATC ACTTACCGCT TTAAATAATC GAAAAACTTG     180

GAGGGATAAG AAATGAAAGT AAGACCATCG GTCAAACCAA TTTGCGAATA CTGTAAAGTT     240

ATTCGTCGTA ATGGTCGTGT TATGGTAATT TGCCCAGCAA ATCCAAAACA CAAACAACGT     300

CAAGGATAAG ATAGAAAGGA GAAACATGG CTCGTATTGC TGGAGTTGAT ATTCCAAATG      360

ACAAACGCGT AGTAATCTCA TTGACTTATG TTTATGGTAT CGGACTTGCA ACATCTAAGA     420

AAATTTTGGC TGCTGCTGGA ATCTCAGAAG ATGTTCGTGT ACGTGATCTT ACATCAGATC     480
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877

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AAGAAGATGC TATCCGTCGT GAAGTGGATG CAATCAAAGT TGAAGGTGAC CTTCGTCGTG        540

AAGTAAACTT GAACATCAAA CGTTTGATGG AAATCGGTTC ATACCGTGGT ATCCGTCACC        600

GTCGTGGACT TCCTGTCCGT GGACAAAACA CTAAAAACAA CGCCCGCACT CGTAAAGGTA        660

AAGCTGTTGC GATTGCTGGT AAGAAAAAAT AATATAGGAG GTAAAAGTCT TGGCTAAACC        720

AACACGTAAA CGTCGTGTGA AAAAGAATAT CGAATCTGGT ATTGCTCATA TTCACGCTAC        780

ATTTAATAAC ACTATTGTTA TGATTACTGA TGTGCATGGT AATGCAATTG CTTGGTCATC        840

AGCTGGTGCT CTTGGTTTCA AAGGTTCTCG TAAATCTACA CCATTCGCTG CTCAAATGGC        900

TTCTGAAGCT GCTGCTAAAT CTGCACAAGA ACACGGTCTT AAATCAGTTG AAGTTACTGT        960

AAAAGGTCCA GGTTCTGGTC GTGAGTCAGC TATTCGTGCG CTTGCTGCCG CTGGTCTTGA       1020

AGTAACAGCA ATTCGTGATG TGACTCCAGT GCCACACAAT GGTGCTCGTC CTCCAAAACG       1080

TCGCCGTGTA TAATCATCGC ATTACACTGC TTTTCGTTTA AGAGGGAGTA ACTAAATGAT       1140

CGAGTTTGAA AAACCAAATA TAACAAAAAT TGATGAAAAT AAAGATTATG GCAAGTTTGT       1200

AATCGAACCA CTTGAACGTG GCTACGGTAC AACTCTTGGT AACTCTCTTC GTCGTGTACT       1260

TCTAGCTTCT CTACCAGGAG CAGCTGTGAC ATCTATCAAC ATTGATGGTG TGTTACATGA       1320

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TGGTCGTGGA TATGTACCTG CTGATGAAAA TAAAAAGGAT AATGCACCAG TTGGAACACT       1620

TGCTGTAGAT TCTATTTATA CACCAGTTAC AAAAGTCAAC TATCAAGTGG AACCTGCTCG       1680

TGTAGGTAGC AATGATGGTT TCGACAAATT AACCCTTGAA ATCTTGACAA ATGGAACAAT       1740

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GATGATGAAA GTACGAAATC TTGGACGCAA GAGTTTGGAA GAAGTGAAAC TCAAACTCAT       2040

TGATTTGGGT CTTGGATTAA AAGATAAATA AAGGAGGAAT ACATGGCTTA CCGTAAACTA       2100

GGACGCACTA GCTCACAACG TAAAGCAATG CTTCGCGATT TGACAACTGA CCTTTTGATC       2160

AACGAATCAA TCGTGACAAC TGAAGCTCGT GCTAAAGAAA TCCGTAAAAC TGTTGAAAAA       2220
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878

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ATGATTACTC TAGGTAAACG TGGTGATTTG CATGCACGTC GTCAAGCAGC TGCTTTCGTA      2280

CGTAATGAAA TCGCATCTGA AAACTATGAT GAAGCAACTG ATAAGTACAC TTCTACTACA      2340

GCACTTCAAA AATTGTTCTC AGAAATCGCA CCTCGTTATG CTGAACGTAA CGGTGGATAC      2400

ACTCGTATCC TTAAAACTGA ATCACGTCGT GGTGATGCAG CGCCAATGGC GATCATCGAA      2460

TTAGTATAAA ATCATCAATT TTGTTGAGTG TTATGATGAT GGAGTCTTGT GCTCTTAGTC      2520

TAGCTCTGGT CTACCGCTAG GATTTCGGTC CTAGCGGGAA CACTCATCAT AAGTTGGGAT      2580

AGTAGACGCT TGTTTACGAA ATTGTTTTTT TCTTAAGAAC AACTTCGTAA GCAGGCGTTT      2640

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GTTTCTTATT TTAAGAAGAA TTGGAGTTTA CTTATGAAAG CCATTATAAC TGTTGTTGGT      2760

AAAGATAAAT CTGGAATTGT TGCAGGTGTT TCTGGTAAAA TTGCAGAATT AGGATTGAAT      2820

ATTGACGATA TCTCTCAAAC TGTCTTGGAT GAATATTTTA CGATGATGGC TGTTGTATCT      2880

AGTGATGAAA AGCAAGATTT TACCTATCTT CGTAATGAAT TTGAAGCTTT TGGGCAAACT      2940

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GAGGTCATCA TGGATATTAG ACAAGTTACT GAAACCATCG CCATGATTGA GGAGCAAAAC      3060

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AATCGTGCTG CGGAGAAAAT CTATCAAAAA ATTACGACAA AGGCGGCTAA TTTAGTAGCT      3180

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ACGACGGCTG CCTTGGCCCT CTTGAACGAC CAAGTTAAAA AGGGTGGAGT GATGGCCTGC      3960

AACCAAGTCG GTGGTTTATC TGGTGCCTTT ATCCCTGTTT CTGAGGATGA AGGAATGATT      4020
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879

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GCTGCAGTGC AAAATGGCTC TCTTAATTTA GAAAAACTAG AAGCTATGAC GGCTATCTGT        4080

TCTGTTGGAT TGGATATGAT TGCCATCCCA GAAGATACGC CTGCTGAAAC TATTGCGGCT        4140

ATGATTGCGG ATGAAGCAGC AATCGGTGTT ATCAACATGA AAACAACAGC TGTTCGTATC        4200

ATTCCCAAAG GAAAAGAAGG CGATATGATT GAGTTTGGTG GTCTATTAGG AACTGCACCC        4260

GTTATGAAGG TTAATGGGGC TTCGTCTGTC GACTTCATCT CTCGCGGTGG ACAAATCCCA        4320

GCACCAATTC ATAGTTTTAA AAATTAAGAA AATAGGAGAA ATTTTAAGTT CTATTTAAGA        4380

TTAGACGTGT ATACTATAAT CATTAAATAA AGACCTCCTA ATATTATTTG AAACAGATAA        4440

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TGTGACTCAA GATAAGATGG CTCCAGAAAT GATACCAGAT AGCATCATTG GAGTTGTAAT        5640

CTTAGCAAAG GTATTGAGAC GACTACTTCC TAAGCTTTCA GCAGCTTCTT CAATACTTGG        5700

TGCTATTTGT TGTAAGCTAG CAACAGATGA GCGAATAGTA TAAGGTAATC TTCTGGCAGA        5760
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880

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TACCATACTG AGGCTGTCAA TTAAGTTTGT AAACAAATTC CGTTTTCTAA CGGCTAGGTA     5940

GGAGATAAAT GTCGCAAATA GAACAACTAG AACTAAGGCA ATCAAAGGGA TACGAATGGT     6000

ATTGAAAATA GCAGATCCCA TACGATGGAA AGCTACCTTG TAACTGTTTG GAGAATAACC     6060

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TAAAACAGAG ATAAAGATAA TTCCGTAGAC TGTTGCATAA ATGGCAGCCA TTTTTCCTTT     6180

TGTAGTTTTT TTAGGCTCAA TTGGATGGAG CAGATTCATG CTGAAACTGT AGCGGTTTGC     6240

AATGTGTTTT TGGATAAGGA AAATTGCCAA GGCAATGATA ATCGCCATAA TTGCAAAAGC     6300

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CCGAAGGACC CCATGCTTTC AGCTGCTTCA AGTAGAGAAT TGTCAATACT GTTCATTGTT     6540

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ACCTCATTTC GTCCTAGCAA GAGAACCCAG GAGTAGGCTC CTACGAAAGG AGCTGACATG     6720

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TTTATGATAG AGTTCTTTTG GTCGGCCGAT TTGTTGGATC ACCCCATCTT TCATAACAGC     7500

AATTTGGTCT GAAATAGCCA TGGCTTCTTC TTGGTCGTGG GTTACATAAA CAGTTGTAAT     7560
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881

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TCCCACTTCG TGTTGGATTT CTCGGATGGC TTGACGCATA TCCAAGCGAA GTTTGGCCTC    7620

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CAAGGTGACA CGTTGTTGTT GTCCACCACT GAGTTTATCG GGCTTTCGAT CCGCATATTG    7740

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ACAATGTAAG CGTTTTTAAA ACATACAATT CTATTCTATA GTGTATTGAA TCTATAACAG    9240

TACACTTTGA CTGCTAAAAT ATTTCTATAA ATTAATTTGA CTTTCCTGAT AGAGATGTTC    9300
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882

ACATCTTATT TCAATTCACT ATATTAGAGT AAAATTCTCT ACAAAAAGAA GAATAGCCTA   9360

TTTTACTATT CTTCTGAGTG ATTTCAATTC CTTTGGGGAA ATATGGAGAT ACTTTTTAAA   9420

TCCTGACAAA TGGTTGTTTC TTTTTCTAAA TCGGTGATAC TGTATCGGAG AATGCGCGTG   9480

AGGTCACAAA GGCTGCGATA GAGCTTCTAT GGAGAATTTC TTTTTGGAGA GATTTTTTAA   9540

AGGAATGAGA CATCCGCTAC CTCCTTGGAA GGTTTTTG   9578

(2) INFORMATION FOR SEQ ID NO: 128:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13440 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

CGGGCTGTTG TGACGATTCT TATTTCTATC TGTGTTATCT TTTTGGGAAC TATTTTGGGT   60

GTTGTCTTGG CTTTTGGGCA ACGTTCAAAG TTTAAACCGC TTGTTTGGTT GGCCAACTTG   120

TACGTTTGGA TTTTCCGTGG GACACCGATG ATGGTTCAAA TTATGATTGC CTTTGCTCTT   180

ATGCATATCA ATGCTCCGAC TATTCAGATT GGAATTTTAG GTGTTGATTT TTCGCGTCTG   240

ATTCCAGGGA TTTTGATTAT CTCTATGAAT AGTGGTGCTT ATGTTTCGGA GACTGTTCGT   300

GCCGGAATCA ATGCGGTTCC AAAAGGTCAG CTAGAAGCGG CTTATTCGCT AGGGATTCGT   360

CCTAAAAATG CGATGCGTTA TGTGATTTTG CCACAAGCAG TCAAAAATAT CTTGCCAGCA   420

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CTTTTATTTG CAGCATTTTA CTACTTGATT ATGACCTCTA TTCTGACAGT AGCCTTGAAA   600

GCTTTTGAAA AACATATGGG ACAAGGAGAT AAGAAATAAT GACAGAAACC TTGATAAAAA   660

TTGAAAATTT ACATAAATCC TTTGGAAAGA ATGAAGTATT GAAGGGCATC AACCTCGAGA   720

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AACAATTCAA TCTCTTTCCT AAATATGACTG TGATGGAAAA TATCACCTTG TCCCCTATCA   960

AGACCAAAGG TGACAGTAAG GCCGTTGCAG AGAAAAGAGC TCAGGAACTT TTGGAAAAAG   1020

TTGGTTTGCC AGATAAGGCA GACGCTTATC CACAGAGTTT GTCAGGTGGC CAGCAACAGC   1080

GGATTGCCAT CGCGCGTGGG TTGGCTATGG AACCAGATGT TTTGCTCTTT GACGAGCCAA   1140

883

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CTTCAGCCCT AGATCCTGAG ATGGTTGGAG AAGTTCTGGC TGTTATGCAA GATCTAGCCA    1200

AGTCAGGAAT GACCATGGTT ATCGTAACAC ATGAGATGGG ATTTGCCCGT GAGGTGGCAG    1260

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GGAATTATGG AAATGTTCCA TGAATATGGG ATTGACTTGG AAGGTAAAAA TGCAGTCGTC    2040

ATCGGTCGAT CCAATATTGT CGGAAAACCT ATGGCCCAGC TTCTTTTGGC AAAGAATGCA    2100

ACAGTAACCT TGACTCACTC ACGTACTCAT AATCTTTCCA AGGTGGCTGC AAAAGCAGAT    2160

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GCGGTAGTCA TTGACGTTGG GATGAACCGC GATGAAAATG GTAAGCTCTG TGGGGATGTT    2280

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TTGAGTGTGC TGATTCTTGT TTAAAAAAAG AAATTTTAGA TTACATCTGT CAGCATCCCT    2760

TTCTGCCACC ATTTACTCCT ACAGATAAAA GAGTAGCCTC GACTTATGAC CTACATAAGA    2820

GGTTAGTGAC TTCAGACTAC TGTAGTCATA CTACGACTAT AGATGCAGCG ATTTCTATTT    2880
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884

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ACATGCTTAA TTTATTAAGT GAGTTGTATA TTTGCATTAT TCCAACTCAT AATAAGAGCC    3240

AATTTGAAAA TATTATTCCA ACCAAAATAC AAGATAGGGT GTATTATCTT GACTATGCTG    3300

GAGAAGACTT AGAAGAGTGG ACTAAGAAAG TCTATCAAGT TGTTTTAAAA CAATCAGATA    3360

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ATTTATCAAG GATGGGATGG TTGTAGGGCT AGGAACAGGT TCTACTGCCT ATTATTTTGT    4620

CGAAGAAATC GGTCGTCGAA TCAAGGAAGA AGGCTTGCAG ATTACAGCTG TGACGACTTC    4680
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885

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ACCAAGTTTC CGTGAAAAAG ACGGCCAACG TTTTGTGACC GATATGCAGA ATTTTATCAT    5040

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CTGTTGCCGA TAACTTTGGT GTGGAAACTG CTATGATTGG GGAAAGTTTC TTAGATAAAT    6420
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886

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AAAAATTAAG TATCGGAGTT GTATCTGTTG TAGTCGGCTT TGATTTCTAG CTCCAGCTGG    8220
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887

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TTCTAAGGAG GAATTGAAAG AGTCAGAAAA TGATGCTCCA AAACTAGAAA CTCCTCTTAG    8340

AGAGGAGCCA AGACTAGCTC CTCAAACGCT TCCGGAAGCA AGTGAAGTTC TTGAAAACAA    8400

AAGGGAAGAG TCAAAAGTAG AGATAACATA ACCAGCTCAA GCGGATGATA TCCGCAAGGT    8460

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AATCAAAGAG CAAACTAAGA AACTAGCCGC AGGTTGCTCA AAGCACTGCT TTGAGGTTGT    9960
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888

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GAGATTTTCG AAGAGTATAA ACAGAAAGGT AGAGCGCGTG TTCTAATTTG AACACGAGTA     10080

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GCTTTTTGAT GGGTTTGGTA TCTTTCTCAA TATAAAATAT AAAATAAAGA AAGGTAGAGC     10320

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CAGGATTTCT CGTCAGGTTC CTAATTTTCA GTCGTTTTCT TCTCGCTCTT TGTATCATAA     10440

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GATAGTGGTG TTTCAAGTCT TCTGAATAGC TTAAAATCTT GTCAAGAATT TCTTTATTTG     11580

TTAAGTGCAT GCGAAAAGTA GGGCGATAAA AACGTTTATC GCTsArTTTA CGACTATCCT     11640

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GATTCATAAT TTGAACACGA AAACGACTCA TGGCACGGCT GAGATGTTGG ATAATATGGA     11760
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889

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AGTGATTTCG GATGACAGCT TGTGTTCTGC CTTCAAGAAC AGTGATAATA TTAAGATTAT    11940

CAAAATCTTG CGCAATGAAA CTCATCTTTC CCTTAGTGAA GGCATACTCA TCCCAAGACA    12000

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TAGCAGTACG CATAGCTGAT TTTTGAGCTG AGTTCTTTTC GATTCGTCTA ACGTTCAATT    13380

CAGCGCGTTT GATAGCTGAT TTAATGTTTG CCAATGGTCT TACCTCCATA TTTACTAACT    13440
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(2) INFORMATION FOR SEQ ID NO: 129:

890

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 8512 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

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CCTTTTTTCA AAAACTAGAT ACTAGTCTAT CAAAAGTAGG AAAGGGTTTC AAGAAAATTG      60

ATTGGAAATT TTTTGAAAAT CATAGAACTA TTAGCTAATC CCTAGTATTG AAAAGACTGG     120

ATAGCTTCTT TCAGGTCATC TTGTAAACTA TTTCTCTGGT CAAGTTGGAC ATAGACTTCC     180

ACCAGACAGG ATCTAAAGTT GGAAAATTTG TAAAAATCCT CCCTTTCTTC TATCGGAAAA     240

TCAACAGTTT TTATCCAAGA AGCTACTTGT TCTTGCTCCA ACTTCCCTTG TAAAATAGGT     300

TCATAGATCA CTCTTGCTAA ACGCCAATCC TCATCATCTG TAAAGCGAAT CGACATTCTT     360

TTAAATAGTT GGCCAAGTAT ATCAAATACT TCATGAACTC TGTTTTTAGG AAAGTCTGGA     420

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CCTACTCTCC CAACTCAGCA CTATAGGAGA TAATCTGGTC AACTGTGTCA GACAAGAATT     960

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CAAGTGGTGT CTTGCTACCA CCTGATTTGA GGAGATTGAG CCAGTCTTCA GCTCCAGTTT    1080

CAGAATGTTT TAGATGAAGG TAACCAGCAG TCGAGATAAC TAGTCCTGCT GAGTAAGTGT    1140

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CAATTTCAAT AGCATCTCCC CAGAAATCCG TCAAAACTTC CTTCATAATG CTGTTGAGCT    1260

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CTTCCAAGAG GTGGGTGATA AAGTTATGGA AGTAGGTGTC TGTCAAGCGA TGAGCCAGAG    1380

CGAAGCGTTT TTGACGTGGG TCATTAGACT GGTTCTCCAA GTAATCACTG AGTAGCAATT    1440

CATTGAAGGT TGACGGTGCT TCAACATAGT AGGTCGACAT ATGGGCATTG AAGTAACTTT    1500
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891

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CATCGCTCAA ACGGCCTGTC CAGCTCATGA GTACATAAGG GTGTACGCGA TATGGGTCCG    1620

CCGCATAACC ACCGGAATCC TTGCCACTGT TAGCAGCAAA GTCCACCCAG CGCTCTTCTT    1680

GGTAACGAGC AACTTCCTGA CAATATTCTT GCCCCAAAGG TTCTACCGAC TTCATGACCA    1740

AATCATAGGC ATCGTCAATA GTCACTTCAG GATTCAGGGC GCTGTCCAAG TCCAATTTCC    1800

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GGTAGAAATT CTCATAGGTC ACAAAGCTGT TTTTGTAGGT CTTGCCATGG GCTTCAAAGT    2160

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ACTGACCAGT CTGCAGGAAA GGCCCAGATT TGGCTAGCCC CCAGTTCGGT TACTTTTTGA    3180

GCGATGAACT CCAGCTTGTC TCCCTTGGGA AATCCAGATG CGATGGTCAC TTGGACTGGT    3240
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892

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AGTTCCACAT TGTCATTTAA TTCTTGGACC AACTCAAACT GACGATTTTC CATATCCAGC    3300

ACGCGCGCCA AGCGCTTGAT GCCATCATCA AAGACTAAGG TAACCTCATC CTCTTCTTTC    3360

AAGCGCATAA CCTGAAACAT ATGCTTACTG GTTTCCTTGT CCTCGATAGT GACAGGAGAG    3420

ATAGCACTGC CTTTTACAAA ATACTGCTGC ATGCTAGCCT CCAATCACAC CAGAGATATC    3480

CTTGGTTTTC TTAAAGACAC AGGTATTCCA TTCCCCTTGA ACCATGTGAG TTTCGAGGAA    3540

AAATCCAGCT GACTCAGCCG ACTGGCGCAC CATGTCCAAC TTGTCCTTGA TAATGCCACT    3600

CATGATCAGG TAGCCTTCAT CCTTTACCAA GCGATAAGCA TCGTCTATTA GATGAATGAG    3660

GATATCCGCC AAGATATTAG CCACAATCAC ATCTGCCTCA ATTTCCACAC CCTTAAGCAA    3720

ATCTCCAGCC GCTACATGGA TATTTTCCAT GCCAGGGTTG AGCTCAATAT TTTCCTGAGC    3780

CACACGAACC GCCACATCAT CCAGGTCATA GGCGAAAATT TCTTTAGCCC CCAGAAGCGA    3840

GCTGGCAATA GAGAGAACCC CTGAACCAGT CCCCACATCT AGCACCGTTT CGCCACCACG    3900

AAGAACCTGT TCCAAGGCAA AAAGGCTCAT CTTGGTAGTT GGGTGGGTTC CAGTACCAAA    3960

AGCCATGCCA GGATCCAGCT TGATAATCAT TTCCCCCGCA GTCGCCTCAT AGTCTGTCCA    4020

AGAGGGAACG ATGGTCAAAT CATGAGTGAT ACGAGCAGGT TCATAGTATT TCTTCCAGTT    4080

GTCTGCCCAG TCTTCCTCAG CCAAGGCAGT CGTACCTATT TTTAACTCTC CCAAATCCAT    4140

AAAATCTGTC AATTCTGCTA GACGAGCCTG CAAATCCGCC TCAACCACTG TCACATCCAC    4200

CGTGTCAGGG TAGTAGGCTG TCACTACGAT TTCTTCTTGC TGCTCCACCT CTGGGAAAAT    4260

CTCTCCAAAG CGGTCCACAT TTCCCACATA GTCCATACTG TCTTCGATTG CGACTCCTTG    4320

CGCTCCCAGC TCAATCAAGA GATTGGAAAC CAACTCCTCT CCCTCACGCT TCACTGTAAC    4380

TTTTAACTCT TGCCATGTTT CCATTATTAA TACCAAGCCC GTAAAACACA AAACCAAAAT    4440

AGGAAATTCT CTGAAGACGC TTGTGTCTAA GAGAAGTTTA TCTTTTTGGC ACAGTGTTTA    4500

GGGCGGGTTC AGTTTAGAAA TGTAACTGAA CCATCCTTTC TAATCACTTA CTTTTAAATA    4560

ATCTTTTAAT CTCTCTTGCA ACTGAGGCAC AACTTGACTG GAACTAAGAA ATTCCTCAAC    4620

ATTCATCAGC TGATAGCCCT GTCCTTCATC TCCGAAGATG ATATTGTCAA ATTGTTCTTG    4680

TCTTAGCTGA CCAACCATAA AGACCGATTT CTTGCCTTTA AAAATTACGC TAGGATAAAT    4740

CTTGCTCCAA AGCAGACAGT CTTCATCTAA ATGAATTCCC AGTTCCTCAT AAACTTCACG    4800

CCGAGCGCAT TCAAAAGGGC TTTCGTCCCC TTCACGGCCA CCACCTGGCA GTTCCCACAT    4860

ATTGGCCCAG GGAATACTTG CCTTATCATC GCGTAAGATA GTCAAAAGCT TATCCCCACA    4920

AAACAAAGCA ATCTTGCAAC CTGTGAAATC AGAAATTTCT AGTTCCATCT TCAGTTCCTT    4980

CTAACATTTC CTTTTCCAGC TCGGCTAACC AGTTTTCATA ATATCTTTTC TCATCCCTCA    5040
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893

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ACATTCGACT ACTATCCATT TTCTGTCTAG CAATCTTGAG AGCCTTACGA GTTCGATCTA        5100

CATCTTTCTT CACCTTTAAT TGATACCAGG CTTGTATCAC TTGAAGATTG GACAGTTTGA        5160

GAGACAGAAA CGATTTGACC TGTCGAATAC TAGCATATTG CTCCGCTTGC TCAAAATCTC        5220

CTTCCAACAA GGCGATATGA AGCAGGGATA GTTGGGCAAC TGTCTGCATC ATCGGAGTAG        5280

TTGTCCTCTC AAGTAATGCT TGAAACTGCT GTTTAGCTAC TTCTTCCTTC CCTTCCAAAA        5340

TGGAAACTTC ACCTTGCATA CCTAATACAC CATCCGCAAA ACTCCCTCGT GCATCCTCAG        5400

GAACTGCTTG AACAAAGTCT TTCAAATCAT ATTCTTGAGG AGCTAGCAAG GTCTGGGCAG        5460

AATGTCTCAA TACCAGGTAG GCGTATTTGG TATTTTCAGG GTGTTGTAGT AATTCCCAAA        5520

TTTTTGCTCC ATCGGTGATG TCGACTGGCA AAATGTTATT TAGGAAGAAA GATAAATTAA        5580

GAAAAATCCA AGTCCCTGCA AAATACCAGC TTCTTGTCAA AAATCCAAAC AATATCGCCA        5640

ATAATATCAA GCCGAGATGA ACCATCAAGC CTCCTGAAAG CATCAGGATG ATTCTTTGAT        5700

CGCTTTCATC CTCTTTTAAA CCAATGTATT GAGCACCAAC ATTTTTCAGA ATGGCTGTTC        5760

TACTAAGATG AAACCTGCCT GACTTTTTGG TCAAAATAAA ATGTCCTAAT CCAAAAGCCA        5820

CCAGCCGATA GCCTGTCAAG TAGCCACAAA AAGCATGACC CAGCTCATGA AGAATAAAGA        5880

TTAAATACAT GCTTAGAAGA GCGAAGGCAT AACCAAAAGT AAAGGCTAAA ACTGCGGAAT        5940

ACCCCAACTC TGCAAATGCG ATTGTTCCAC AAGCAAAAGC TAGCATAATA AAGACAACAG        6000

CTAGCACATA AACCAAATAA GTCCCAATTT TCTTCATAAC ACCTCCAACC AACTCCTAGT        6060

ATCTTGGATA AGGATAAAAT TCTCCCTTTT CCAAGCCAAT TTTTCCTTCT TCAAAGACTT        6120

CTTGGTTCCA TTCCATGACA AATTCCTCTG CTTCTGGGTC TTCCAAAAAG TCCATGAGGA        6180

CATCTAGCCC AACCTCAGCA GTATCTTTAA GGAAAAGCGC AAAATAAGCT AAAAATTCAC        6240

GGGAAAATCC TTTTTTAGGC AGGTAAGGAA TAACAGTCAA ATAGTCTTCC TCATTGACTG        6300

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CACTTCTACC GCATGGTTGC GTTTGTCCCA GCTAATCTCA AAGTCAAAGG GAAAGTTCTT        6480

GTCCAACTCT TCCTCTAAAA TATCTAAAAA TCCGTATGTT GCCATTTTGT CCTCTTTCTA        6540

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CCACAAAATT ATTTTATGTC CTAATTATAC CATATTACCT CATTTAAACC CTTGGTATCA        6660

GTGATTTTCT TAAAAGTCTG ATTTCTTCAT TTCTCATAAA AATCAATATA AAAAGCCCTC        6720

GAAAGGGCTA ATAAATCTAT AAAATCAATA GGCGAGTAAC TAGCACAAGT GGACGTGCTT        6780
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894

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TTTTATTGAC TATTACCACG ATACCACGCT TAATCTTAGG CTTGAACTTT CTTATCTGCA      6840

ATAGCGTCTG TCAAAGTCTG AGAAAAGTTA AGCCCCATTT CTCGTCCCAA CTTATCTGCC      6900

CATTTTGGTA TGGTCAAAGT CTTTTTAATG GGTTCCTGAC TTCCTAGGTA TTCTGATACA      6960

TCAACAGATA CCATAGAAAT AAAAGATTTA TCAAGGTCAT AGGTTGACAC GAAATCTTCA      7020

TCATCTTTAA AAGGATCATT ATCAATTAAA GACAAGCTAT TGATATCTGA TGGCTGAGGT      7080

AACTCTCCAT CACTCTCTAT CAAATCTGCA ACAGTTATCC CTAGCCACTC CGACCCCATA      7140

GCCAAAGCCT CAGAAATCCC CTCTCCTTGT GTAGCTGAGT ATTCAAAATC TGGGAAATGG      7200

ACAAAATAAG TCGCTTCTGT TCCGTCTGTG TCGTCATAAT AAAATAAAGC TGGATACGTA      7260

ACTAACATTT CACTACCTCC ATATCAAAAA GCAGGGACTG AATTTTACAA CCCAGCTTGC      7320

TTTCTTATCC CTCTTTCAGT GTACTTATTC AGCTCACCAT GAAGGATTGT GATAGGTCTT      7380

TCCCCTTGCT TTTCCATTTT AATATGGGAG CCTTTACCGC CTCTAGTCTT TATCCAACCA      7440

TGGGCCGTAA GGAGTTTAAC CATCTCTTTT TGTGTCATAG GCATAGCGCT TTTACCTCCT      7500

GACAACACCA TTATAACACG TGTTACACGT ATTGTAAAGG AGTGATACTT ATTATTCTAT      7560

TATACATAAA AGCCCCTAGA TGTGGTTCTA AGGGAAGCCA ATTTATTCAT ACCTATTTTT      7620

CTAATGAGTA GTAAAACTG CTTCTTTATC GAGCAATTCA TCATCTGTAT AGTCAATTGT      7680

AAAAGTATCT CGATCTAAGA CAGATTGAGG CGGAGTTGAA TGAATCATAG GAACACTGCG      7740

TACTCTATAT TTTTTATCTC CAATTTTTAC AAACTGATAC TCTTCGAAAA TCAAATTCAA      7800

ACCACGTCAA CGTCGCCTTA CCGTACTCAA GTACAGcCTG CGGCTAGTTT CCTAGTTTGC      7860

TCTTTGATTT TCATTGAGTA TGATTAACTC TCAAGTCTTC GAAATCAGGA TTTTCAACAG      7920

TTATTACAAG GAGGCGATTT ACTACTTCAA AAACATCAAT TATTCTATTT TTCATATTTT      7980

TTCAACCCAT TATTAGAATG AACTTCTTGG TAAGCAAAAT CAAGTTTAGA TTTAATGTTT      8040

TCGTACAAAT CTAAAATCTC TTTTGGAGTA TCTTCCCGGA AGAAAAGTTT TCTTTTCCCT      8100

GAAATAACTT GATCACTAAG AATCCAATGA CGAATTTGTT TTGTAAAAAT CAAAATTTCC      8160

TGACTTGGTA GTTCCATCAT TTCCATTGCT TATCACCTCT CTTTTCATTA TAGTTCATAC      8220

AATGACATTC AGCAATATTA TTTCTCAAGT CAGCACTTCC ACTTCTTTAG GCTCAACTAT      8280

CCTATTTTGA GCTTTAAGGA AAATCAAATC TCTCATGCTG ATACCTCTCC TCATTAAATT      8340

AAATAGTAAA AAAGATTCTA TCTCACTCCC TGATTATTAC AAAACCATTG AAATATCACA      8400

ACTAATAGGC TAGAATGGAC ATAGTAAGAT ATAGTAGATG AGTCATTCTA CTCAAATCCA      8460

CGTTAGAAAG GACTGCTATG CCAGACAATC TCGCCGTTCG CATGCGCCCn GG             8512
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(2) INFORMATION FOR SEQ ID NO: 130:

895

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 2869 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

CTCGTTTCAA	GGTTGAGTCT	CTTGCAAATC	TTGTTCGCGT	TCTTCCTTTT	GCCAAGGCAT	60
CTCTCCCATG	GTTGGTGCcA	GCCATTGTTG	GAATCTTGCT	CTCATTGGTT	CTACCAAACA	120
AGCAAGAAAG	CGATGTTTTT	GAAATGGAAT	AATCACTTAA	ATCACTTTTG	TAGCCAAGTC	180
TACAGGAGTG	ATTkTCTTTT	TTTATCCGAT	GATAAATGTG	TTATAATAGG	TAGCGAAAGA	240
GGTGAAGAAA	TGAATCAAAC	AGTAGAATAT	ATCAAAGAAC	TGACAGCCAT	TGCGtCGCCA	300
ACAGGCTTTA	CTCGTGAGAT	TGCGGACTAT	TTAGTCAAGA	CTCTAGAAGG	TTTTGGTTAC	360
CAGCCGGTTC	GCACATCCAA	GGGCGGTGTC	AATGTAACTA	TTAAAGGTCA	AAATGATGAG	420
CAACATCGCT	ATGTGACTGC	CCATGTAGAT	ACGCTTGGTG	CTATTGTCCG	TGCTGTCAAA	480
CCAGACGGCC	GTCTCAAAAT	GGACCGTATC	GGTGGCTTTC	CTTGGAACAT	GATTGAAGGA	540
GAAAACTGTA	CCATTCATGT	GGCTAGCACA	GGTGAAAAAG	TATCAGGAAC	CATCCTCATC	600
CACCAAACTT	CTTGCCATGT	CTATAAGGAT	GCAGGAACTG	CAGAACGCAC	GCAAGACAAT	660
ATGGAAGTGC	GTTTGGACGC	CAAAGTAACT	AGTGAAAAAG	AAACTCGTGC	TCTTGGCATT	720
GAGGTCGGTG	ATTTTATCAG	TTTTGACCCA	CGAACTGTCG	TGACAGAGAC	AGGTTTTATC	780
AAGTCTCGCC	ATTTGGATGA	CAAGGTCAGT	GCGGCGATTT	TGCTCAATCT	CCTTCGCATT	840
TATAAGGAAG	AGAAGATTGA	ATTGCCCGTA	ACAACTCATT	TTGCTTTTTC	AGTCTTTGAA	900
GAAGTGGGAC	ACGGTGCAAA	CTCTAACATT	CCTGCTCAGG	TAGTAGAATA	TCTGGCTGTG	960
GATATGGGAG	CCATGGGAGA	TGACCAGCAA	ACAGACGAAT	ATACAGTGTC	TATCTGTGTC	1020
AAGGATGCTT	CTGGACCTTA	TCACTATGAC	TTCCGTCAAC	ATTTGGTGGC	TTTGGCGAAA	1080
GAGCAAGATA	TTCCATTTAA	GCTGGATATC	TATCCATTTT	ATGGTTCGGA	CGCTTCAGCG	1140
GCTATGTCTG	CAGGGGCAGA	AGTCAAACAC	GCCCTTCTCG	GTGCTGGTAT	AGAGTCTAGC	1200
CATTCCTATG	AGCGTACCCA	TATTGACTCG	GTGATCGCAA	CAGAACGAAT	GGTCGATGCT	1260
TATCTTAAGA	GCACGTTGGT	GGACTAATAT	GTGCCTTATT	TGTCAGAGAA	TTGACCTCAT	1320
CAAGAAGGAA	GAAAATCCTT	ACTTTGTCAA	AGAGTTGGAA	ACAGGCTATC	TTGTGGTTGG	1380
AGACCACCAG	TATTTTGAAG	GCTATAGTCT	CTTTCTAGCC	AAGGAGCATG	TCAGCGAATT	1440

896

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GCACCATTTG AAAAAGGAGA CAAGACTCCG TTTTCTAGAA GAAATGAGTT TAGTCCAAGA      1500

GGCAGTTGCC AAGGCCTTTG CTGCTGAGAA AATGAATATC GAACTGCTAG GAAATGGCGA      1560

TGCTCATCTT CATTGGCATC TGTTTCCACG ACGGACAGGT GATATGAATG GTCATGGTCT      1620

CAAGGGTCGT GGACCAGTCT GGTGGGTTCC CTTTGAAGAA ATGACAGCAG AAACCTGCCA      1680

AGCAAAACCG GATGAGATTA AAAGATTAGT CAAACGTTTA TCGTCAGAAG TAGATAAACT      1740

ATTAGAAATA AAGGAGTAGA AATGAAGAAA AGATACCTAG TCTTGACAGC TTTGCTAGCC      1800

TTGAGTCTAG CAGCTTGTTC ACAAGAAAAA ACAAAAAATG AAGATGGAGA AACTAAGACA      1860

GAACAGACAG CCAAAGCTGA TGGAACAGTC GGTAGTAAGT CTCAAGGAGC TGCCCAGAAG      1920

AAAGCAGAAG TGGTCAATAA AGGTGATTAC TACAGCATTC AAGGGAAATA CGATGAAATC      1980

ATCGTAGCCA ACAAACACTA TCCATTGTCT AAAGACTATA ATCCAGGGGA AAATCCAACA      2040

GCCAAGGCAG AGTTGGTCAA ACTCATCAAA GCGATGCAAG AGGCAGGTTT CCCTATTAGT      2100

GATCATTACA GTGGTTTTAG AAGTTATGAA ACTCAGACCA AGCTCTATCA AGATTATGTC      2160

AACCAAGATG GAAAGGCAGC AGCTGACCGT TACTCTGCCC GTCCTGGCTA TAGCGAACAC      2220

CAGACAGGCT TGGCCTTTGA TGTGATTGGG ACTGATGGTG ATTTGGTGAC AGAAGAAAAA      2280

GCAGCCCAAT GGCTCTTGGA TCATGCAGCT GATTATGGCT TTGTTGTCCG TTATCTCAAA      2340

GGCAAGGAAA AGGAAACAGG CTATATGGCT GAAGAATGGC ACCTGCGTTA TGTAGGAAAA      2400

GAAGCTAAAG AAATTGCTGC AAGTGGTCTC AGTTTGGAAG AATACTATGG CTTTGAAGGC      2460

GGAGACTACG TCGATTAATA CTCTTCGAAA ATCTCTTCAA ACCACGTCAG CGTCGCCTTA      2520

CCTACTGACT GCGTCGGTTC TATTCACAAC CTCAAAACAG TGTTTTGAGT cGATTCGTCA      2580

GTTTTATCTG CAACCTCAAA GCTGTACTTT GAGCAStGCG GCTAGCTTCC TAGTTTGCTC      2640

TTTGATTTTC ATTGAGTACA AAAAGTAAAC TTTTCTCTTG CAATTCCAGA TAAATAGTGT      2700

ATAATGGATG GGTATGTGAA AAACATACTT GTGGGAGGTA AAAATCTCTA ATTACCGCCA      2760

AAACCACAAA GGAGGATTTA AAAATGGCTA AAAAAGTCGA AAAACTTGTA AAATTGCAAA      2820

TCCCTGCTGG TAAAGCTACA CCAGCTCCAC CGGTTGGACC TGCTCTTGG                  2869
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(2) INFORMATION FOR SEQ ID NO: 131:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6186 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

897

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CTGAATCCCT TATAGGAGTC CAGTAACTTT TTAGCCTCTA CTTTGCCTTC ATAGGCAGCT        60

TCAACATCAT TAAAAAAAGA ArGCACTGAA GCAAGTTCTT CAGTGCTCCA CGACAAATCT       120

AGTGGGTAAC TATACTGTTT GTTCATTAAC TAATACCAGC TCTCATTCTT GCTTCTTTTA       180

GTTCTTGCTT ACGATAACTA CGAGGGAGAA AAGCACGAAT CTCATCTTCA TTAAAACCGA       240

TTTGCATACG CTTGGCATCA ATAATAATTG GACGACGCAA AAGACTAGGA TACTGCTCAA       300

TCAAATGAAG CAATTCCGAT ACCGAAATAC TCTCTACATC AATATTCAAT TTTTGAAAAA       360

TTTTTGAACG AGTTGAAATG ATGTCATCAG TACCATTTTC GGTCAAGGAA AGGATGTGTT       420

GCAATTCTTT TCTTGTTAAA GGACTGGTCA TAATATTGTG TTCCACAAAG GGAACTTATG       480

TTTTTCTAAC CAGGCCTTAG CCTTACGACA TGATGTACAG CTCGGTGATA GAAATAGTGT       540

AATCATGCTT TTCTCTTCTT ATCTATACTT TGCTACTTCT ATTATACAAA AAAATAAAGC       600

GCTTGACTAG GGATTTTTAG AAAAAAAGCC TATTTTTTCA AGAAAAATAG GCTTTTTGCG       660

AACGATTGAC ACAATTGGAT TTGGTTAATT CACTCTTAAC GATGGTTTTA AACGATATAT       720

ATTTTTATAT ATGTAAATTA AAAACATCTT TCCTTTCACT TCCTACGACT TTTCAGATAC       780

AGATAGCCAA AGAAGTTTTC ATAGAGGGCA AAAAGAGGA GGAAGGCATG AAGAAAGAAG       840

GTCTCTGGCA AAATCATAAT AACAGGATCC TTGGCTGGAT CAAAAAGCCA GGTATCATCT       900

CCCACAAAGA GAATTTGATG GAAAAGAGTA AAGAATTGGT CAAAACCAAT CAAAACTCCC       960

CCAAGTCCAA TCATCACAGG TAAGACTACT AGAGCCAGGA GACTTTTTCG ATAAAGAGAC      1020

AAAAAGTCCT TTTTCACAAT CCTATTGACA AAGACATAGA AACTTGGCAG TGTCACTAGA      1080

GCTACTAGCT GAACCAAATG AAAGAGATTC TTGACCACTG CGAAATGGTG CAGACCAGCT      1140

GCTGACGAAC GAAAATCAGG CATCTGTAAG ACCTGACTAA AAGGATTGGT CAGATAATTC      1200

ATCAAGATAT GAAAATTGTA TTGAATGGTT TCTGGTTTTA GATAGACTCG ATTCGTTAAG      1260

TTTAGCCACT GAATCTCCAT AGGATAGAAA ATCCAAGCCA GATAAATGGT CAGAAGGATG      1320

GAGAGGGAGA GGAGAAAGAG CATAGAGCCC CAAAAGATCA ATTTAGTTTT CATCAAAATC      1380

CCACTCCGCA AGGCTAGAAA CCACATGTGT CGGTGCGATT GGCAGGCCAG CTACTTCTTC      1440

TGCCTTAGTA AAACCTGTCG TCACCAAGAG CGTTGGAATG CCATTGTCAA TCCCAGCCCG      1500

AATATCAGTC AAATAATTGT CCCCAACCAT GATTAACTCT TCACGTTCCA AACCTAAGTG      1560

CTCAACCGCC TTGTCCATAA TGATGGCATT TGGTTTTCCG ATATAAACCG GCTTCACTCG      1620

TGTCGCTACT TCAAGCAGCG TAATCAGTGA GCCAGCACCT GGCAAAGAC CGCGTTCCGT      1680

CGGGATGTTG AGGTCAGGAT TGGTTCCGAT AAAATGGGCA CCCTTTTGAA TAGCAAGAGT      1740
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<div align="center">898</div>

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TGCTGTGGCA AATTTTTCAT AGTCGACTTG CCAATCCAGA CCAACTACCA CGTAGGCAGG    1800

TTTTTCCTTG TCTTCCACAT AACCAGCCGC CTTGATGGCT TCCTTGAGTC CTGCTTCTCC    1860

GACGACATAG ACGGTCTTTT CAAGCCCCAA ATCATTCATA TAGTCGATGG TTGCCAAAGT    1920

CGCTGTGTAG ACAGTCGATA GGGGCGTATC GATATTAAAA TTCTGAGCCA ACATCTCCTT    1980

AACACTCTCT GGAGTGCGGG TTGTATTGTT GGTTACAAAG AGATAGGGAA TGTCCCGCTT    2040

TTGCAATTCA TGAACAAAAG TCTCTCCAGC AGGGATTCGG TCTTTCCCCT TATAAATGGT    2100

TCCGTCTAAA TCAATTAAAT AGCCTTTATA TTTCATCTAT TTCTCCCTAA GCCTTTTTTA    2160

TTTCTTGCCA AGTAATGATT GCTTGGGCAT TGATAACCCC ATCACTTGTA ATTTCATGCT    2220

TGCTTTCCAG TCCAGTCCGT TCAACAGCCG ATGTAATCAC CCCACCTGGT CGAACTTCCT    2280

TGACATACTT GAGGTTGATT TTCTTGGGAA TATAGTGGGT CAAAAAATCC GCTCCCATGA    2340

CCTCAAAAAT CCAGTCCAAG TATTTACTGT TATTGACATG ACCATTCATA TCCAAGTCGT    2400

AAAAACGAAC ATGGTAATCC TTGCTGATCG GTTCTTCCAA GGACTCATAC TTCGGTCCAC    2460

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GGACTTTTCG ACTGTCGCGG TCCATGAGAA CAAAGGTCGC CATCATGTGG ATGAGCTCCT    2580

GCTCCGCTTC ATTATAAATA GTAAAGCGAC GGTAGCAAAA AAGTCGATTG TAGCTCAAGG    2640

CTTCCGTTTC GATGGTAATT TCTTCCGCAA AACGAGGCAA ACGAACCACC TCAATATCAT    2700

ATTCTACGAT AATCCAGACC AGATTATATT CTTCCAAAAT GGCCTTATCA CTAACTCCCA    2760

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CCATGATCCT ACTCCAAAAT AAATCGTTCT GCTACAGTAT CTCCCAAAAA GAGACCTCTC    2940

TTTGTCATGC GAACGTGGTC ACCCTCAATC TGCATGAGGC CTTGTTGAAC CAAATCTCTG    3000

ACAATTTCTC CATAAAGTCC AGCAAAAGAC TGTCCAAATT TTTCCTCAAA TCGCGCCATG    3060

GAAACCCCGG ATTTCTTGCG GAGTCCCAAG AACATTTCTT CTTCCATTTG CTCCTTTTGA    3120

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CCATAGTATT CAGCATTGTC CCAGTACATG AGATTATGAC GACTTTCAAA ACCGGGTTTG    3300

GAGAAATTAG AAATCTCATA ATGCTCAAAA CCCGCTCGCT CCAGCTCTGC AATGATGTAC    3360

TCAAACATCT CCGCTTCTAG TTCCTCCTTA GGCAGAGGCA ATTTCCCACG TCGCATCCGG    3420

TTCATAAAGA CCGTATGGTT TTCTAAAATC AAACTATACA AACTCATGTG GGGAATATCC    3480

AATCCAATGG CTTTAGCCAC ATTTTCCTTT ACTTGCTCCA TGGTCTGACC AGGCAGAGCA    3540
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899

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TAAATCAAAT CAATGGAGAT ATTGTCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA    3600

TAAATATCCT TCTCCAAATG ACTGCGCCCA ATCTTTTTCA ACATCTTATC ATCAAAGGTC    3660

TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTCA AAACAGCTAT CTTATCCGCA    3720

TCCAAATCGC CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT    3780

TTAGTCAAGC CATTCAGTAA CACCTCCAGT TGCGGAGCCG ACAGGGCTGT CGgTGTTCCA    3840

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TGCTCTAAAT AGCTGTCGAC TGGCTGATTT TTGATGAAGA CCTTTGAAAA ATCACAATAA    3960

TAACAAATCT GGGTACAAAA TGGGATGTGC ACATAGGCTG ACGTTGGTTT TTTCTGCATA    4020

GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAAT CACCATCCCC AGATACATAG    4080

TCCGTCCGGA GATGGTGATG GTTTATTCTT CTGTTATATC AATCACAATC TCTTCTGAGT    4140

CATCAAGAGC TTCGGCTTTT TCTTGCCATT GCTCCTTGAG ATTATTTAAT TGATTTTTTG    4200

ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAGC AAGTATACTG TCCACAGTGA    4260

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CTAGAAAATC TTGAGCCTGA CTGCAAACTT GTTTGCCCTT ATCACTTGTT AAAAACAAGG    4440

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GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAAA GCCAAGCAGA TTCCATAGAG    5160

ACTCATAAAG GAAAGTCGGT TGACGGTAGC TCCCCTCAAT ATACATCTGG TCACGGATAA    5220

AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAAGAAAT    5280
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900

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TACCCCAACG CCCCAAACTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAAT    5340

CCCAAGTATT GATGAGTTTA CGGTCAGCAA AGATATAGAG CACAAGAGCC CCAGTTATCA    5400

AACCACCGTA AATGGCCAAA CCACCATTCC AAATGGCAAA AATCTCTCCT AAATTCTGAC    5460

TATAGTAATC AAATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAAATA GCCAAGGGAA    5520

AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTTCTTTCTA GGTGCTTCTT    5580

TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTCACAAT ACATAAGGCA TACCAACGAA    5640

TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTCGAGCG    5700

ATTAGACTTG TCAGTCGTTC GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCCTTGGCA    5760

CGATAATTCA TGGCAGCTGC CTCAATCACA ACAGAGATAT TACGACCTGT TTTAACTGGA    5820

ATACGAATAC GAGGAATGtA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGACG    5880

ATCAAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CCTGTGAAGA    5940

ATCCTTGACA GCACTCGCAC CGTAGAGACT CATAACATCG ATAATACCAA CCCCACGAAT    6000

TTCAATCAAG TGTTTCAAAA TTTCAGCTGG TTCACCCCAG AGAGTAATCT CATCCTTGGC    6060

AAAGATATCG ACACGGTCAT CGGCTACCAA ACGGTGACCA CGTTTGACAA GCTCAAGACC    6120

TGTCTCGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC    6180

CATCAA                                                             6186
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(2) INFORMATION FOR SEQ ID NO: 132:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9541 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

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GAAAATCACA ACCCTTTTTG CAAAATTTTT GAGATTATTT TCACAAACTT GATTTTTCAA      60

AGTATACTCA ATAAAAATTA AAAAAATCCA CTACGTCAAG GCGAGGCTAA TGTGGTTTGA     120

AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATAGTA AAATAAAAAA ACTGAACAAT     180

TTGGTTGGGG ACAGCCAAAC CAATTTCTCA CAATGTTTCA GAAACAAGGG TGTGCTATTC     240

CAATTTCAGC CTACTATAAC TGTCATAGAT TGCTGAAACA AAGTCTAGGT AAAAGTCTTC     300

ATAATAAAAA GACCTCCTAT CAAGTGTTCA AAACTTTGA TAGGAGGTCT TGTTTTGTGA     360

AAATATTTAT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCTTTCA     420

ATTTCAATGA ATGGATTTTT TACTAATACT CATAACTGGG AATTTGTCTG TGTAAAAATA     480
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901

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GCGAGATAGA  TGGTATTTAT  AAAACACTCA  AGACAGCTAG  ACTAATATCA  TTTAAAACAT        540

TATCTTCTTT  TGAGCGACTG  TTGGTTACCA  ACATAGCTAA  ATTTCCTGCA  TTTTCAAATT        600

GATAGGGTTC  TGATTTAGCA  TTCACAACCA  CCAAGAGGTG  TTCTTTGCCG  TGAACTTCAT        660

AGATAAGGTA  GCCGCTATGT  TCAATCGCAG  AATGCACAAA  GACATGATGG  TAAATTTCAT        720

CATAGCTAGA  GTAAGAAAAG  GCACCAGTTT  TTGTCTTCAA  TCGGATGACT  TGACGGATAA        780

ACTCAATACT  GTCTTGACGC  TCATTAATCA  AGTTCCAGTT  CACTTGGTTC  ACACTGTCAG        840

GAGCATTATA  GCTATTCATC  GCACGCTCTC  TATCATCATG  GGTCAACTCA  CCATTTTCAC        900

CAGTCGCAAC  CAGTTTGGTA  CGACCAAATT  CTTGACCGAT  TTCCATAAAG  GCCATCCCCT        960

GCATGAGCAG  ATTCATGGCT  GTGGCAGTTT  CGACCTTGCG  CATGATTTGC  TCTGAACTTT       1020

GGTCTGGATG  AAGGGTTGCC  AATAAATCGT  GAAGATTGTA  ATTGTCATGG  GCTTCTACAT       1080

AGTTAAGCAC  CTGATTTGGA  TGTGTATAGC  TTCCTAATTC  ACGACTTCCT  AGGATTGCTT       1140

TAGCTAGAAT  TGGCTCTGTC  GCAGCACCAC  TGACAAAACC  TGACTTGATA  GCACCATAAA       1200

CTTCTCCCCC  TTTGACAGCA  TCGCGCTGAT  TGTCATTAAA  GAAACCAATA  TTTGGCATCT       1260

GGTAGGCATT  GTCCTTCTTG  GCCTTATCAT  AAGGGGCAAG  ACCTGTTCCC  ATATCCCATC       1320

CTTCTCCATA  GAGGATAATG  TTGGAGTCGA  TTTCATCCAA  GCTTTGACGA  ATCATCTGCA       1380

TGGTCTTGAC  ATCATGAATC  CCCATCAAGT  CAAAACGGAA  GCCGTCAATA  TTATATTCCT       1440

GCACCCAGTA  TAGAAGAGAA  TCAATCATAT  ACTTGCGAAA  CATTTCGTGT  TCACTGGCTG       1500

TTTCATTTCC  AACACCCGTT  CCATTCTGGA  AGGTACCATC  TGGATTCATA  CGATAATAGT       1560

AATCAGGGAC  TGTTGTTTGG  AATGGTGCAT  CAACAACTGA  GAAGGTATGG  TTATAGACTA       1620

CATCCATAAT  GACTCCAATA  CCCGCATCGT  GATAAGCTTG  AACCATCACC  TTCAAATCAC       1680

GAATGACCTG  AGCTGGATCA  TCTGGATTAG  TTGAAAAACT  AGTTTCTGGC  GCGTTATAGT       1740

TTTGTGGATC  ATAACCCCAG  TTGTAGGTTA  CATTTCCATC  CTCATCGTAT  TCTTTATCAC       1800

GGTCTGCAAT  TGGTTGCAAT  TGAACATAAT  TGTAGCCCAG  CTTCTTGATG  TAATCAAAAG       1860

CAGTTGACTG  GCCGTATTGG  TTAACTGTTC  CAGCCTGAGC  AGCACCCAAG  AAAGTTCCTC       1920

GAAGATGTTC  ATCTACACCC  GATGTAGGTG  ATTTAGTCAA  ATCACGAATG  TGCATTTCAC       1980

AGATAACTGC  CTTACATGGA  TTTTCCAAGC  GCCAAGTAGC  CTCCGAACCG  TGCTTAACCT       2040

CGAAGTTTTC  AACTTGCTTT  TCTACATGGC  TCAGAATAGC  TGAACGTTTG  CCATCAGGGC       2100

TGGTCGCGAT  TGTATAAGGA  TCACGTGTCA  GTGTTTGGTG  ATGAGGGAAT  TGGACTTGAT       2160

ACTGATAAGT  CTTACCTACC  AAATCTTCTT  CAACATCCAA  ACTCCAGACA  CCGATTGTAT       2220
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902

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TGTCCTTATG ATTATAAGAG TAGCTATTGC CTCTTTTCAT CTCAAAAGTC TTCCAAACGG    2280

GTGCATCATT AGCAGCTGAT TCATAAACGA CAACTTGCAC TTCTGTCGCT GTAGGTGACC    2340

AGAGAGAAAA ATGAGCCTGA TTGTCCTCTA CACGGCAACC CAATTCTCCT TGGTAACCCC    2400

AATGATGATC AAAACTAGCA CTGTTAATGG CCTTATCAAA GGCAAAAGGA TTTTGATTTT    2460

TATAGAAAGG ACTGGCAATA GCAGGATTTT CAGAGTAATA AATCCTATCA TCGCCTTCCA    2520

AAATCCAGAC CTCTGTTAAT AGGGGATAGT GATTAAAACG GATAGAATAT TCTTTACTAG    2580

TTTGACCTGT ATGAACCACA AAATTCAAGC TTTCTATAAC ATGTGAACTT GGGTGTTCAA    2640

AGCTAAATAA AGCTCCAAAA TAATCTTCTT TGTAGGTTAG CAAATCAATT CGTTGATCCT    2700

GACTTTTTAC AAAGGAGCAA GTGTCATATT CTCCATTCTT ACGATGGTAA TGAATGCGCA    2760

TAGGGTAGTT ATACATTTTT TATTTTTCCT TTTTACTTTG TTTCTATTTC ACTAATAAAT    2820

TTTTGTCAAT CTCGTCTCAA TTAACAGACA TAGTCATATT CTCTAAACTC TGTTTTTAAA    2880

CGATCCATTA CAAACTTTCT AGCCATGCCT CATCTCTGAC CTGGATACCA AGTTCTTGTG    2940

CTTTTTGCAG TTTACTTCCA GCGTCTGCAC CTACCACGAC GAGGTCGGTC TTTTTAGAAA    3000

TACTACCTGT CACTTTGGCA CCCAGACTTT CGAGTTTACT TTTAGCTTCT GAGCGCTTGA    3060

GTCGTTCCAA TTTTCCTGTC AATACCACGG TCAAACCTGA CAAGGCCGCA TCCGCTACTA    3120

CCGTCTGTCC TTTATAGTCC AGATTGACCC CAGTTTCTTT CAATTCTCTG AGCAGAATTT    3180

CAGAGCCTTC TGTCGCAAAA TAAGTCTGAA GACTTTTGGC AATCACGCCA CCTAGACTTT    3240

CAATACTAGC CACTTCCTCT GAATCTGCCT GAGACAGATT TTCAATTGAA TGGAAATATT    3300

GAAGTAAAAG CTGACTAACC TTGCTTCCGA CATGACGAAT TCCCAAACCA AATAAGAGCT    3360

TCTCGGCAGA ATTTTCCTTT GATGCTTGGA TAGCCTGATA CAGTTTAGCA GCGGACTTTT    3420

CCTTAACTCC CTCTAAAAGG AGGAAATCCT CTTCTTGCAA ACGATAAATA TCCGCCACAT    3480

CCTTGACTAA ATTAGCAGCA AAAAGCTTCT CAACAATAGA TGGACCAAGG CCTGTAATAT    3540

TCATAGCATC ACGAGAAGCA AAGTGAATCA AGCCTTCCAT GATTTGAGCA GGGCAACGCG    3600

GATTGATACA ACGTAGGGCC ACTTCATCTT CAAAGTGCAA CAAGTCAGAG TTACAACTTG    3660

GACAGTTTGT AGGGATATCT AGTTTTTCTT CAGAAACCCG TTTGGACTCT ACCACACGTA    3720

AAACGGCAGG GATGATGTCA CCAGCCTTAT ATACAATGAC CGTATCGTCT TTTCGGATAT    3780

CTTTTTCAGC AATATAATCT ACATTGTGCA GGGTCGCACG GCTAACAGTC GTACCGGCAA    3840

GTTGTACTGG TGTTAGATTA GCAGTTGGAG TTACAACACC GGTACGGCCA ACTGTCCAGT    3900

CAACTGATAA GAGTTGAGCT TCTTTTTCTT CGGCAGGGAA CTTGTAGGCT ACTGCCCACT    3960

TTGGAGCCTT AACTGTAAAA CCAAGTTCTT CTTGACTTGC TAGGTCGTTG ACCTTGATTA    4020
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903

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CCACTCCATC AATATCGTAA GGCAGATTTT CCCGTTCCTG TCCTACTTCT TGGATAAAAT      4080

TCCAGATTTC ATCTATGTTT TCAGCCAAGA TTCGCTTAGG ATTGACCACA AAACCTAGTT      4140

GTTCTAGGTA CTTCAAACCC TTTTCTTGGC TATCACGAGT TGAAGGGCTG GCTTCTTGAT      4200

AGAGAAACGT TGCAAGATTA CGCTTGGCAA CTACTGCTGT ATCCAACTGA CGCAGAGTTC      4260

CTGCTGCCGC ATTACGAGGA TTAGCAAATT CAGGCTCTCC ATTTTCTTGG CGCGCTTGGT      4320

TAACTTGGTC AAAGGAAGCG CGTGGCATGT AACATTCCCC ACGAACTGTG ATATCTAGTT      4380

CTTCTGGCAA AGTCAAAGGG ATGTCCTTAA CACGCTTGAG GTTTTCTGTG ATATTTTCAC      4440

CAATTGAACC ATCTCCACGT GTTACCCCAG CAACCAAAAT CCCCTTTTCA TAAGTCAGCG      4500

AGATAGATAA GCCATCGATT TTCAGCTCAC AAATATAGGT CGGATGAGCC ACTTCCTTAC      4560

GAACACGCGC ATCAAAAGCA TCTAGCTCCT CACATGAAAA AGCATCCTGC AAACTATAAA      4620

GAGGATACTG ATGACTGTAT TTTTCAAAAC CATCTAAAAC CTTGCCACCA ACACGATGAG      4680

TCGGACTGTC TGCTAGCACT TGCTCTGGAT AAGCAGTTTC TAACTCGACC AACTCACGGT      4740

AAAGGCGGTC ATACTCACTG TCTGAAACCG AGGGATTATC GCTGGTATAG TACTCAGTCG      4800

CATAGCGATT GAGCAAAGCG ACTAACTCAT TCATTCTTTT ATTCATAAGA CCATTTTACC      4860

ATAAAACAAG CCCTCCTCAC AAACGAGAAG GGCGGAAAAA ACACTTAGTT TGAAATTATT      4920

TTTGAAACTC AAGCAACCTT ATATCAATTT TTCAAAATGA GTTCGAACAT ATCCGAGAGC      4980

TAAGAAATAT AAGGCTACAA CTCCAAGTCC AATAATCAAG AAAGAATAAA GATGGACACT      5040

TGGCAAGACT GTCATAAATC CTTTTGCAAT AGGCATAAAT AGAATAGCTA AGGTAAAAAT      5100

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GGGAAGTAGA AATTCAAAAG CTGCAAAAAA GAAATTAACG CTGGAAGCTA CCAGCAAAAG      5460

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ATCTCTCCCA GTAAAAGCCT TTTTCTCTTG AACTTTTGCT TCCTCTTTTG GAAGGAAAGC      5580

CACTAGAACA AAAGCAATGA AAAAAGTCAG CGAGTCTAGC AGTAGCGTCA TATGGAGACT      5640

TGCAAACTGT AAAACAAGGA AGGAAAGAAC AGGAGAGCTA ACACCTACAA CCTGCAAAAC      5700

CAGCTCTAAG CGAGAATTAT AGATCACAAT CTCATCTTTC TCCACCACTT CAGTTATGAT      5760
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904

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AGCTTTATTG GCTGTGCGAG AAAAGGCAAA AGCAATAGCC TGCACAATGT TAGCAACAAT      5820

CAAAGCGCCA ATCATCCAGC TATCATTCCT TATGAAAGAA ATAGCCAGAC AAAGAATCCC      5880

ACAAACAAGA TCTGCCGTCA TTAAAATCTT ACGACGAGAA AAACGGTCTG AAATAACTCC      5940

GCCAAAGGGA TTGACGAGAA TAGATGTGAC GAGCTCAGAA ATCTGATACA TTCCTAAAAC      6000

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TTTGAAAACC TGCAATATCG TTTGAATAGT AAAGTGGGAT AATCTGTGCC ATCATAGACA      6840

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ATAGTAGTCG TAATCTCCAA GGTAGAGAGT TGAACCATTC TCAGACAATT CCAAAACATG      7440

AGTTGCCACA CGATTGATAA AGTAACGATC ATGACTGACA AACAGCAAGG TTCCATCAAA      7500

GTCAATCAAG GCATTTTCTA GCACTTCCTT ACTATCAATA TCCAAGTGGT TGGTCGGCTC      7560
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905

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ATCCAGAATC AAAAAGTTAT TGTTTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT        7620

TTCGCCACCA GATAGCATGC CGACTGATTT TTTAACATCA TCTCCTGAGA AAAGGAAGGC        7680

TCCAAGACGG TTGCGGATTT CAACTTCTGG TGTCAGTTTG AAATCATTCC AGAGTTCATC        7740

CAGCACCGTA TTACTTGGTG TCAGCTTGCT TTGGGTTTGG TCATAGTAAC CAACCTCAAC        7800

ATTAGCGCCA AAGCGCTTTT CTCCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT        7860

AAAGGTTGAC TTGCCGATAC CATTTGGACC AACGATAGCG ACAGCATTCA TCTTACGAAG        7920

ATCTAGGTTA ATCGGTTGTG ACAAGACTTC CCCGTCATAG CCAACAGCTG CATTTTCAAC        7980

AGTCAAAACA ACATTGCCCG ACGTTTTTTC AGACTGGAAG GTCATGTTGG CTGATTTCTT        8040

GCCAGCTTCA GGCTTGTCCA AACGTTCCAT TTTTTCCAGT TGTTTACGGC GAGATTGAGC        8100

ACGTTTAGTC GTTGAAGCAC GAACTAGATT GCGATTGACA AAGTCTTCCA GAGCAGCGAT        8160

TTCCTTCTGT TGCTTTTCAT AGTTTTTTGC CTCAGTAACT AGCTTTTGCT CCTTCAATTC        8220

GACAAAACGA GAGTAATTCC CCACATAGCG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT        8280

AATTGTCGCA ACCTTGTCCA AGAAATAACG GTCGTGGCTG ACGATAATGA GGGCACCGCT        8340

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CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAAACGAGT        8460

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TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GGCGAAAATT        8580

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TTTATTAGCT TGTAAAATAA TCATACAAGT AGTATAGCAT GTTTCCCTAA GGCATTCAAG        9000

ATAATCGTAA GTCTTTTAGT ACAACTTTTA TAACATAAAA TAAACTAAAT TATGTATATT        9060

TTATATTAGA TTACTTCACT ATCTTGTTGG ATTTTCTAAC CAGCTAATCT TGTTTCAAAT        9120

AGTTATCGCA CAAGTCTATT ATTTAATTCT TTTCATCATT TACGTACGTA TAGCAGATTG        9180

AAATAAGATG AGAACAAATC GATTGGGAAA GTAAAATTAA TTTCTATAAA TGTTTTAGCA        9240

ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT        9300
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906

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TTTTAACTCT ATTTATTACT AGATTTCATA ATTAAAAAAC CTACTGACCA AGCTAGAAAG    9360

CTTGATACAA TAGGCTTTTT AAAGACTGAT TATTTAACAG CGTCTTTAAG AGCTTTACCA    9420

GCTTTGAATG CTGGTACTTT AGAAGCTGCA ATTGTCATTT CTTTACCAGT TTGTGGGTTG    9480

CGACCTTTAC GTTCTGCGCG CTCACGAACT TCAAAGTTAC CAAAACCGAT CAATTGAACT    9540

T                                                                   9541
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(2) INFORMATION FOR SEQ ID NO: 133:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3502 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

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TTGACTATCC TATCATGCTT TCTAAGGTCT ACTCAAGAAA ATCATTTTCA AGTTTTCACA      60

CCTTTCTCAA AAAAGTTAAA AAATTTTCTC AAAAACGCTT GACTCTGACC TAAGGCGAAG     120

GGTTATACTA TCATTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT     180

CAGGTGTCTC TGTCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCCTTAA     240

AGTCGGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATTT GGAACGCCTT CAGGTCATTC     300

TTTACTACAA ATATCTAGGC TTTTCTTTAG AGAAAATAGC AGAGCTGTTA AAGGAAGAAA     360

GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC     420

ATCTGGATAC CTTGATTTCC ACCTTGCAAA AAACTATTCA AGAACAAAAA GGAGAAAGAA     480

AAATGACCAT TGAGGAAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC     540

AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG     600

GTCACGAAGA CGAGGCTACG GCCGCCTTTA ACCAAGTCTT TCAAACTTTG GCACAAAATC     660

TTCAAGTTGG TTTACCTGCA ACAGCAACCG AAAACCAGGA GCAAGCAGCC AAGCTCTTGC     720

AAGCCATTCG CACTTATGGA TTTGACTGCT CTATTGAGGT ATTCGGTCAT ATCGGTAAAG     780

GTTACGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTTCT GAAACAGCCC     840

AGTACACGTC AGATGCCATT GCGGTTTACG TTCAGACAAA TGCAGAATAA ATAGGCTAGG     900

AATTTCCTAG CCTATTTTTT ACTTCAAATC ATAAAGCCAG TCGTCACCGT TTTTGTAGTA     960

AAAGAATTCA CTGAGATCTT CTTCTAGAAA CACACGAAGC ATATCAGACA TATCATCGGT    1020

TGCAAGTTTT AGATGAGAAA GATTTTCAAA GTCCTCCCAC CAAACTTTCC CTTCGTCTGA    1080

AGACTGGAGT TCACCAGTAA AGTGTTCTGT CTTGTAAAAA AGGACGACAT AACGATAATC    1140
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907

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CTTGTCGTCA TACCAGTTTT TGATACCACA GAGTTGGGGT TTGGAAATGA TCAGACCAGT    1200

TTCTTCTTTC ACTTCACGAA TGACAGCATC GACAAAGGAT TCGCCACGTT CAACATGACC    1260

ACCAGGAAAA GTAATGCCAG ACCAGTCGGG ATTAACTCGG TCTTGGACCA GGACCTTATC    1320

TCCGTTTTTA ATCATACACA TGTTAACAAA TTCGACTGCC TCTCTTCTGT TCATTCTTCA    1380

CAACCTTTAA TCTTTAATCA TAATGCAGAC TTCCCGCCAC CCAGCCGGTA CAGAGGGCAG    1440

AAGTGATGTT AAAGCCACCC GTGTGGGCAT TGATATCCAT AACTTCGCCT GCAAAGTGGA    1500

GGCCAGGTAC CAGCTTACTT TCAAGGGTTT TAGGATTGAT TTCCTTGAGA CTGACTCCAC    1560

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AGGATTTTTC CCGATTTTCT TCTAGAAATG TAACCAAGTC CTTCTCAGAA AGTTGAGGCA    1800

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GACCTGACAA ACCAAAGTGG GTAAAGAGTA AATCATGAGT GATGACATGC TTACCATAAC    1920

TTAGGGTCAC ATCGTCCAGA GAAATACCTT GTAAGGCTTT ATGTGGAAAA TCTGTTAATA    1980

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GACCAAAACC AGTCGAACCA GTCGAAGGAT AAGACTTACC ACCTGTTGTG ACAATGAGTT    2100

TCTCACAAGT GAAGGTTTGA TCCGCTGACT TAAGGACAAA CTGGTCATCT ACTTTTTTAA    2160

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TACCATTGTT GGTCACATTG CAACGTCCCC CACCAGTCCC AGCTAATTTT TTTCCAAGTT    2460

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TCATACCAGC AGGTCCCCCA CCGATGACAA TAGTATCAAA ATGTTTCATA GCTCTATTGT    2580

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TAGCCCATCA GCAAACCGCC CTCTTCTGCA TAGAAACTGC AGAGACCAGA GGTTGGTAGA    2700

ATTTTAATAT CCGCTTGTGG GAAGGTTTCA CGGATTCGCT CTGAGAGCTG TTGACAACAT    2760

TTTTCGTTAT TGCGTTGGGC CATGACAATA CGGCCACCAG CATATCCAGC TTTTACTAAC    2820

TCATCATAGG CAGCTTGAAC TGATTTCTTT GATCCCCTTG CTTTTTGTAG CAATTCGAGA    2880
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908

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GTCCCAGTTT CACTAGCTTT TCCGACCATA CGAATGTTGA GAAGGCCAAC GACCGTACCG        2940

ATAAGCTTGC TCAAACGGCC GTTCTTCACC AAGTTATCGA CTTTGGCTAG GACAAAGAGC        3000

AACTTAGTTT TTTCTTGATA GGCGGTGATA GCTTCAACCA CTTCTTCAAA AGACAAGCCC        3060

TGGTCAATCA AGTCATTCAA TTTTTCTACG AGTAGGTCAA CTTCACCACC AGCAGATAAA        3120

CTATCAATCA CATGAATCTT AGTGTCAGGA TGGTCTTCCA GATAAATATT CTTTGCTAGT        3180

TGAGCACTAT TGTGACTGCC AGAAAGGGTA CCTGTGATGG TTACTAGGAA AATGTTTTTG        3240

GCACCTTCAA ATGCTCGCAA ATAGTCATCT GGGCTTGGAC AAGCCGATTT TGAAGCTTCT        3300

GCAGTTGCAT ACATGGTTTC CATCATTTGG TCAATATCGA GACTGGCGTC ATCAACAAAG        3360

ACCTGATCAG CTACTTGAAT GGTTAAGGGG ACACTTACAA AGGTTGTGTT AATAGCTGGT        3420

GTTGGCAGTT GACGATAATC ACAACCAGAG TCAGCAATAA TCTTCCAAGT CATAGAAATT        3480

CTCCATCTTT GTCAGGAACG AT                                                 3502
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(2) INFORMATION FOR SEQ ID NO: 134:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12665 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

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CGATTGATTT TTTTAAAGCG TTCGATAGAG AATGAGAAAC GAATCCTTAG CAATGGCGGG         60

AAAGAATTTG GAGTTGAGAA TACAAAACGA TTAACTATGG CTCATATTGT TTTTTATCTC        120

TCTTGCTTGG TTGAGGCAAT GGTGCACAAG ACAATTTTTG ATGGCATGGG CATGGTTGGT        180

TTAGTCTTGC TTATTTTTTC TATGCTGATG TTGATGTTGG TGATTCACTT GTTGGGAGAT        240

ATTTGGACAG TGAAGCTTAT GCTTGTCAAT AATCACAAAT ATGTAGATCA TATCTTGTTT        300

AGGACAGTAA AACACCCTAA TTACTTTTTA AATATTCTTC CTGAGTTGAT TGGCTTGACC        360

TTGTTGAGTC ATGCTTATGT GACTTTTGTT TTAGTTTTTC CAGTTTATGC AGTTATTTTG        420

TATCGACGAA TAGCTGAAGA GGAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC        480

ATAAAGAGAT AAATACAAAA TTCGATTTAT ATACAGTTCA TATTGAAGTG ATATAGTAAG        540

GTTAAAGAAA AAATATAGAA GGAAATAAAC ATGTTTGCAT CAAAAAGCGA AAGAAAAGTA        600

CATTATTCAA TTCGTAAATT TAGTGTTGGA GTAGCTAGTG TAGTTGTTGC CAGTCTTGTT        660

ATGGGAAGTG TGGTTCATGC GACAGAGAAC GAGGGAGCTA CCCAAGTACC CACTTCTTCT        720

AATAGGGCAA ATGAAAGTCA GGCAGAACAA GGAGAACAAC CTAAAAAACT CGATTCAGAA        780
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909

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CGAGATAAGG CAAGGAAAGA GGTCGAGGAA TATGTAAAAA AAATAGTGGG TGAGAGCTAT        840

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ATTAAGAACG AGTATTTGAA TAAAATAGTT GAATCAACCT CAGAAAGCCA ACTACAGATA        960

CTGATGATGG AGAGTCGATC AAAAGTAGAT GAAGCTGTGT CTAAGTTTGA AAAGGACTCA       1020

TCTTCTTCGT CAAGTTCAGA CTCTTCCACT AAACCGGAAG CTTCAGATAC AGCGAAGCCA       1080

AACAAGCCGA CAGAACCAGG AGAAAAGGTA GCAGAAGCTA AGAAGAAGGT TGAAGAAGCT       1140

GAGAAAAAAG CCAAGGATCA AAAAGAAGAA GATCGTCGTA ACTACCCAAC CATTACTTAC       1200

AAAACGCTTG AACTTGAAAT TGCTGAGTCC GATGTGGAAG TTAAAAAAGC GGAGCTTGAA       1260

CTAGTAAAAG TGAAAGCTAA CGAACCTCGA GACGAGCAAA AAATTAAGCA AGCAGAAGCG       1320

GAAGTTGAGA GTAAACAAGC TGACGCTACA AGGTTAAAAA AAATCAAGAC AGATCGTGAA       1380

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AAGTCTTCAG ATTCTAGCGT AGGTGAAGAA ACTCTTCCAA GCCCATCCCT GAAACCAGAA       1560

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AAAGAAGAAG ATCGCCGTAA CTACCCAACC AATACTTACA AAACGCTTGA ACTTGAAATT       1680

GCTGAGTCCG ATGTGGAAGT TAAAAAAGCG GAGCTTGAAC TAGTAAAAGA GGAAGCTAAG       1740

GAACCTCGAA ACGAGGAAAA AGTTAAGCAA GCAAAAGCGG AAGTTGAGAG TAAAAAAGCT       1800

GAGGCTACAA GGTTAGAAAA AATCAAGACA GATCGTAAAA AAGCAGAAGA AGAAGCTAAA       1860

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CCGGCTCCAA AAGCAGAAAA ACCAGCTCCA GCTCCAAAAC CAGAGAATCC AGCTGAACAA       1980

CCAAAAGCAG AAAAACCAGC TGATCAACAA GCTGAAGAAG ACTATGCTCG TAGATCAGAA       2040

GAAGAATATA ATCGCTTGAC TCAACAGCAA CCGCCAAAAA CTGAAAAACC AGCACAACCA       2100

TCTACTCCAA AAACAGGCTG GAAACAAGAA AACGGTATGT GGTACTTCTA CAATACTGAT       2160

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GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT       2400

GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT       2460

GGTGATATGG CGACAGGTTG GGTGAAAGAT GGAGATACCT GGTACTATCT TGAAGCATCA       2520
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910

GGTGCTATGA	AAGCAAGCCA	ATGGTTCAAA	GTATCAGATA	AATGGTACTA	TGTCAATGGC	2580
TCAGGTGCCC	TTGCAGTCAA	CACAACTGTA	GATGGCTATG	GAGTCAATGC	CAATGGTGAA	2640
TGGGTAAACT	AAACCTAATA	TAACTAGTTA	ATACTGACTT	CCTGTAAGAA	CTCTTTAAAG	2700
TATTCCCTAC	AAATACCATA	TCCTTTCAGT	AGATAATATA	CCCTTGTAGG	AAGTTTAGAT	2760
TAAAAAATAA	CTCTGTAATC	TCTAGCCGGA	TTTATAGCGC	TAGAGACTAC	GGAGTTTTTT	2820
TGATGAGGAA	AGAATGGCGG	CATTCAAGAG	GCTCTTTAAG	AGAGTTACGG	GTTTTAAACT	2880
ATTAAGCCTT	CTCCAATTGC	AAGAGGGTTT	CAATCTCTGC	CAGGGTGCTG	GCTTGCGAAA	2940
TGGCTCCACG	GAGTTTGGCA	GCGCCAGATG	TTCCACGGAG	ATAGTGAGGA	GCGAGACCGC	3000
GGAATTCACG	AACTGCGACG	TTTTCTCCTT	TGAGGTTAAT	CAATCGTTTC	AAGTGTTCGT	3060
AGGCGATCTT	CATCTTGTCT	TCAAAGGTCA	AATCAGGTAG	GATTTCTCCT	GTTTCAAAGT	3120
AATGGTTGAT	TTGGTTGAAG	AGGTAAGGAT	TTCCCATGGC	AGCTCGGCCA	ATCATGACTG	3180
CGTCAGCACC	AACTTCTTCG	ATGCGTTGCT	TGGCTTCTTG	GACAGTACGG	ATATCACCGT	3240
TGGCGATGAA	TGGAATCTTG	GTTAGAGCTT	GGGCAACCTT	GTAAAGGGTC	TCAAGGTCTG	3300
CGTGGCCAGT	ATACATTTGT	TCACGGGTAC	GGCCATGCAT	GGCGAGGGCA	GAAACACCTG	3360
CAGCTTCAGC	AGCGAGAGCA	TTTTCTACTG	CAAGAGATGG	GTCCGCCCAG	CCGGTACGCA	3420
TTTTGACAGT	AAGTGGGATA	TCAAGGACAG	ACTGGACCTT	GTTGATGATG	GAGTAAATCT	3480
TGTCTGGATC	CTTGAGCCAC	ATAGCACCAG	CTTCGTTCTT	CACGATTTTG	TTGACAGGGC	3540
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CGATATGAAG	CATGTGCAGG	GTTTTTTCGT	TGTTGTATTG	GATTCCCTTG	TCAGAGACCA	3720
TTTCCATTAC	AACGAGTCCA	GCTCCGAGCT	CCTTTGCGAT	AGTACGAAAG	GCTGAGTTGG	3780
TCACGCCAGC	CATAGGCGCT	AAAACGGTAC	GATTGGGAAT	CTCAATATTG	CCAATCATAA	3840
AAGGTGTATT	AAGATTTGTC	ACGAATGAGT	TCCTCCAGGT	CCTTTTCATC	AAAGTTGTAA	3900
GTAGTTTGGC	AGAATTGACA	AGTGATTTCT	GCCCCGTGGT	CTTCCTCTTT	CATTTCCTGT	3960
AAGTCTGAGC	TTGGAAGGCT	GGCAAGAGCG	TTCATAAAGC	GTTCATGGCT	ACAGTCACAT	4020
TGGAAACGGA	TTTCTTCTTC	AGAAAGACGC	TTGTAGGCTT	CGTCCCCGTA	GATAGCCTTG	4080
AGGAGGGCTT	CGATATGGTC	GTCGCTTTCG	AGAAGAGTAG	AGATAGCTGG	CATTTCTTGG	4140
ATGCGTTTTT	CAAAGCGAGC	AATCTCTTCT	TTCTTGGCTC	CTGGCAAGAC	TTGAACTAGG	4200
AAACCACCTG	CAACCTTGAC	CTTGTCTTCC	TCGTCCAAAA	GGACATTGAG	GCCGACCGCT	4260
GAAGGCGTTT	GTTGGCTTTC	AGTAAGGTAA	AAGGCAAGGT	CTTCACCGAT	TTCTCCAGAG	4320

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ACAGGATCGC TACAAGTACC AGTTAGAGAA TCGTCATCCA TATTTACTGA TGGAACATGA    5940

TTTTAAAGAG ACAGCAGAGG AGATTTTTCA TGCTCTACCT GCTTTTCAAC AGGGGACAGA    6000

TTTAGATAAG AAGATTCTCT GGGAATGGCT CCAGTTAATC GAATATATGG CTGAAAACGG    6060
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912

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TGGCCAGCAT ATGCGGATTG GTCTGGATTT GACATCTGGT TTTCTTGTCT TTTCAAGGAT      6120

GGCAGCCATT TTGAAACGGT ATTTGGAATA CAATCGTTTT ATTACCATTG AAGCTTATGA      6180

CCCTAGTCGG CATTATGATT TGCTGGTTAC CAATAACCCG ATTCATAAGA AGGAACAGAC      6240

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GCGGATATTT TAGGCATTGA CATTGCACGT GCTAAAAACC TGGAAACAAC AGCTCTAGGA      7800

GCGGCCTTCC TAGCAGGTTT GTCAGTAGGG TACTGGAAAG ACTTGGACGA GTTGAAACTC      7860
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913

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TACAAGGGCT GGAAGAAGGC TGTGAAAGCA ACTCAAGTCT TTGCGGAAGT AGACGACTAA   7980

TACTGGCAGA ATAAAGCGAT TTATTTAGAA AGTGTGTAAA TATGGAATTT TCAAAGAAAA   8040

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GAGGAATCAC AGGAGCTGGT GTAGCCTTGC AGGCGGCAGC TAGCGGTCTT GAGACTGGTT   8160

TGATTGAAAT GCAAGACTTT GCAGAAGGAA CATCTAGTCG TTCAACAAAA TTGGTTCACG   8220

GAGGACTTCG TTACCTCAAA CAATTTGACG TAGAAGTGGT CTCAGATACG GTTTCTGAAC   8280

GTGCAGTGGT TCAACAAATC GCTCCACACA TTCCAAAATC AGATCCAATG CTCTTACCAG   8340

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CGCAACTTGG AGTATCACGT GGTTTGGATA GCAAGGAAGC TCACTATCTG GCAAATCTTT   9540

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914

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AAGCAACTTA CCGTGCTGAT GTCGAAGCAG CTCTCGCTAA CAACGATTTA GCAGAATTAA     9840

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AAACTTCCAT TTTCTTTGAG CAACATGGAT ATAAGTACTT GTTATGTAGT ATGGATATGG    11340

GCTTTGTGAA TCCAAGTAAG ACTGATAAGC TTGTATACCA AAATATGCTC CACCAATTAT    11400
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915

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TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC    11460

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ATTCCAAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTCGATTT CATTCTTTTG    11580

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TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAAACTT CCGTAATGGA AGTGGAGCGA    12660

AGGGG                                                                12665
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(2) INFORMATION FOR SEQ ID NO: 135:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 5305 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

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CGCTAATCAC TACAATCATT TTATTGTACT TTTTCACTCT CAAGAAAAGC AAGAAGTATT    60
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916

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TTGGTATGCT CCTGCTTTCA CTATTCAACA CGTTTTTGAC TTATACTAGG CTCATTTCCA      180
AAAGCATTAT ATAATAGTGA TATGAAACCA ACTAAACTAA ACAAGAAATA TAAGCAATAA      240
AAATTCGTTT AAAAGATCTT ACTAAAGCTA ATACTAAATA AAAATAAAAG AGTAAACTAG      300
GAAGTTTATT TCAAACAACC TAAAATACTG ATTTTCGGCT GAAGATAATA CTGGAGTGCA      360
AATTAATGGG GTTATAATAA ATAGCTGATA GCTTGTGTTG GTTTTGGATT TTTTAAGAGT      420
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CTCGGGTAGA GCGTGATTTA ACACAAGGTC AACTGGCAGA GGCTGTCGGG GTGACACGCC      540
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TCTGAAAGTT TCTATATCTG CATTGCTTTG TCGCTCCTAT CTTATATCAT TTCAGTATTA      780
GCACCAAGCC TTTTTAATTC TAATATGCTG CTAATCGTTA TCATCATAGG GACATTTTAC      840
TTTTTCAATC GTGCCCGTTA TCTGGGAGTG ACCTACTATG GTCGTTTTCA TTTTTACGATT      900
TTGGGTTGTT TTTTCCTAAC CTTGGCTATT ACGGCTCTTT TGATGTTGCA GAATTATCAA      960
TTCAACATAG AAATTTATCA GCACAATCCT TTGAATTTTA AATACCTGTC TGCTTGGGTC     1020
ATTACTTATA TCATTTACCT TCCGTGGATC TTTATTGGCA ATCTTGGTCT TAAGAGCTAT     1080
GGCGAATGGG CTCAGAAAAA ATTTGAACAA GATATGGATG AATTGGAGAG TGGAGAATAG     1140
CTTGTTACTC TTTTCTCAAT CCAGCTAAAA TGTGATATAA TAGTACTAAT TTATTGGAAT     1200
ACATGAAAGT TCTTGAAAAT TTTCATGGGT TTCTAGCTAA GGAAGTAGGA AAAGTATGTA     1260
TCCAGATGAT AGTTTGACAT TGCACACGGA CTTGTACCAG ATCAACATGA TGCAGGTTTA     1320
CTTTGACCAA GGGATTCACA ATAAGAAGGC GGTCTTTGAG GTGTATTTCC GCCAACAGCC     1380
TTTTAAGAAC GGCTATGCGG TTTTTGCAGG TTTAGAAAGA ATTGTGAACT ATCTTGAAGA     1440
CTTGCGTTTT TCAGATAGTG ATATAGCCTA TTTGGAGTCG CTTGGTTATC ATGGGGCGTT     1500
CTTGGATTAC CTTCGCAATT TCAAGTTGGA GTTGACCGTT CGTTCTGCCC AAGAAGGGGA     1560
TTTGGTTTTT GCTAATGAAC CGATTGTGCA GGTGGAAGGA CCTCTAGCCC AATGTCAGTT     1620
GGTCGAAACG GCTCTTTTGA ACATCGTCAA CTACCAGACT TTGGTGGCGA CGAAGGCAGC     1680
TCGTATTCGT TCGGTTATCG AAGATGAACC CTTGATGGAG TTTGGGACAC GTCGGGCTCA     1740
AGAAATGGAT GCGGCCATCT GGGGAACACG CGCAGCTGTG ATTGGTGGCG CCAATGGAAC     1800
CAGCAACGTG CGTGCGGGTA AGCTCTTTGA CATTCCTGTT TTGGGAACCC ATGCCCATGC     1860
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917

CTTGGTACAG GTTTATGGCA ATGACTATGA AGCTTTCAAG GCTTACGCTG CGACCCACAA   1920

AAATTGTGTC TTTCTTGTGG ATACCTATGA CACCCTTCGC ATCGGTGTAC CAGCTGCCAT   1980

TCAGGTGGCG CGTGAGCTGG GTGATCAGAT TAACTTTATG GGTGTGCGGA TTGACTCTGG   2040

GGATATTGCC TACATTTCTA AGAAAGTCCG TCAGCAACTG GATGAGGCTG GATTTACAGA   2100

GGCTAAGATT TATGCTTCTA ATGATCTAGA TGAAAATACC ATCCTTAACC TCAAGATGCA   2160

AAAGGCCAAG ATTGATGTCT GGGGTGTGGG TACCAAGCTG ATTACAGCCT ATGACCAGCC   2220

GGCTCTTGGG GCGGTTTACA AGATTGTTGC AATCGAAGAT GAAACTGGTC AGATGCGCAA   2280

TACGATTAAG CTGTCTAATA ATGCTGAAAA AGTTTCTACG CCAGGTAAGA AGCAGGTGTG   2340

GCGCATTACC AGTCGTGAAA AAGGCAAGTC AGAAGGCGAC TATATCACTT ATGATGGTGT   2400

GGATATTAGC GACATGACAG AAATCAAGAT GTTCCATCCG ACCTATACAT ACATCAAGAA   2460

GACGGTTCGT AATTTTGATG CCGTTCCTCT CTTGGTGGAT ATCTTCAAAG AAGGAATATT   2520

AGTTTACAAC TTGCCTAGTT TGACTGACAT TCAGGATTAT GCCCGTAAGG AATTTGACAA   2580

GTTGTGGGAT GAGTATAAGC GTGTGCTCAA TCCGCAGCAC TATCCAGTGG ATTTGGCGCG   2640

TGATGTATGG CAAGATAAGA TGGACTTGAT TGATAAGATG CGCAAGGAAG CCCTTGGTGA   2700

AGGAGAAGAA GAATGAGTTT GCAAGAAACG ATTATCCAAG AGCTGGGTGT CAAACCAGTG   2760

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CATCCCTTCC TAAAAACCTT TGTACTAGGG ATTTCTGGGG GACAAGACTC AACCTTGGCA   2880

GGACGTTTGG CGCAATTAGC TATGGAAGAA CTGCCGAGCTG AAACGGGAGA CGATAGCTAC   2940

AAATTTATCG CTGTCCGCCT GCCATACGGA GTGCAAGCTG ATGAAGCAGA TGCTCAAAAA   3000

GCCCTAGCCT TCATCCAGCC AGATGTCAGC TTGGTTGTGA ATATCAAGGA ATCAGCTGAT   3060

GCCATGACAG CTGCAGTTGA AGCGACAGGT AGTCCTGTTT CAGACTTCAA CAAGGGGAAT   3120

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GTCATTGGAA CAGACCACGC CGCGGAAAAT ATCACAGGTT TCTTTACCAA GTTTGGTGAC   3240

GGCGGTGCGG ATATTCTCCC TCTTTACCGC CTCAATAAAC GCCAAGGAAA ACAGCTCTTG   3300

CAGAAACTTG GCGCAGAGCC AGCCCTTTAT GAAAAAATCC CAACGGCAGA CCTAGAAGAA   3360

GATAAACCAG GCCTAGCTGA CGAAGTCGCA CTTGGAGTCA CCTACGCAGA GATTGACGAC   3420

TACCTAGAAG GCAAAACAAT CAGCCCAGAA GCTCAAGCGA CCATTGAAAA CTGGTGGCAC   3480

AAAGGCCAAC ACAAACGCCA CTTACCCATC ACCGTATTTG ATGACTTTTG GGAGTAAAAA   3540

GGTCCGGGGG ACCTTTTTAG CTTCTTGCCC TGAAATTAAA AAGCAAGAAA AACCTCCACT   3600

918

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GGAGGTTTTC AGCCTCTCAT CTTGAAATAA GAAAGTGAGA GAAGGTCTGG GGGATCTTGA    3660

ACCCCGAGTT TAGAAATAAG AAAATGAGGC AGATTCAGTA ACTCGAAGAG TTCGATTTCA    3720

TCGTCTTACC CCTGCAACGA TGACTAGGTT TGAAAAAGCT TGCTAGAGCG CATTTCAAAC    3780

CAGGCAGCAA CTGCGTCAAG AAATTAGAAG ACAAACTCGT TTTCTAGCTG TTACTGAGTT    3840

GAGCCTTTTT ACTACGAGTA TAGAAATAAG GAAGTGAGGT AGCATCATGA AATCTATCGG    3900

TACGCAAATA TTACAGACAG AACGTTTGAT TTTAAGAAGA TTTGTGGAGA GTGATGCAGA    3960

AGCCATGTTT CAAAATTGGG CTTCATCCGC TGAGAATCTG ACCTATGTTA CCTGGGATCC    4020

CCATCCTGAT GTCGAAATCA CTCGAAACTC GATTTGCAAT TGGGTTGCTT CCTATACTAA    4080

TCTCAACTAT TATAAATGGG CCATTTGTCT AAAAGAAAAC CCAGAGCAAG TAATAGGAGA    4140

TATCAGCATT GTTAAGATAG ACGAGGCTGA TTTAAGCTGT GAAATTGGCT ATGTGTTAGG    4200

CAAGGCTTAC TGGGGAAATG GTATGATGAC AGAGACTTTG AAAGCTATCT TGGACTTTTG    4260

TTTTACTCAA GCAGGTTTTC AAAAGGTCAG AGCACGTTAT GCCAGTCTCA ACCCAGCTTC    4320

AGGTCGTGTC ATGGAAAAGG CTGGAATGTC CTATCTACAA ACCATTGTTA ATGGTGTAGA    4380

GAGAAAAGGC TATCTTGCGG ATCTTATTTA TTATGGTATA AGTAGGGAAG AATGTTGAAT    4440

TCTATTTTCT GTTTCTATCG AAGTCAACTA TTTATTGTAA ATATAATAAT TAGCATTCCA    4500

AGTTTATTTG AAACTTTAAA ATAGCATATT GATTAGTACA AGACAGATGT TCTAGTTCCT    4560

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TAATCGACTA GATTCTCCAG CCGAACAGGT GGTAATGTAC TTTTTATAGT GTAATCCTAG    4680

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TATTCATGTT TTTTCTATCA AATTATCTAA TATTAAAATA GTCTCATTCT GATGAGAAAA    4800

CTATTCCCAA ATCATTCATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCCTGACCTC    4860

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TTTCCTCGCT AGATTTCCTC AAAAGGGCAG ACTCCTCCCT TGGTGCGTCA CACGATTTTT    4980

TCATCTCGAC TGTTCTTTAA TGCATCATTA ACGACGCTTT TCTTCTAGGT GGTTCATAAG    5040

GAACAGGAAG ATTCAGGTTG ACTTTTCTAA TCCTAGAATA AAGTGCTGAA AACAATTCGG    5100

AATAGGCATA GAGACTAGAC AATTTGAGGA GCTGCTTGCG TCCTGTTCGA ACACATTTTC    5160

CCACCACGTG AAGAAAAAGA TGGCGGAAGC GTTTGATTGT TAAAGTTTGG AAGTCACCTC    5220

CAGCTAGATG TTTGAGAAAA AGATAGAGAT TGTAGGCGAT ACAGCTCATC ATCATACGAA    5280

CTTCGTTTTT GATTAAGGTT GAACT                                         5305
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(2) INFORMATION FOR SEQ ID NO: 136:

919

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 3964 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

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CAAAAATCAG TAGGAACTCG AGTCTACTGA TTTTTATTTT TGTAAAAAAG TTCAGTAGAT     120

GCAAATGGAT TCGGAAGCGA TGTTACAGTA GATTGAAACT AGAATAGTAC ACCTCTGTTT     180

CTAAAACATT GTTAGAAATC GATTTGACTG TCCTGATCGA TTTGTCCTGT TATTATTTTA     240

TTTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCAA CAATCGTCTT TAAAGATGGT     300

TCAGCTATTA CAATTCCAGG AAATCAATTG GTAGCACAAG ATCCAAAAGC ACAAGATAGC     360

ACTAAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA     420

GATATAACTC ATTTAACAGA TGAAGAAAAA GTTAAGGTTG CTATTTTACA AGCAAATGGT     480

TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC     540

CCAGATGGTT CAGTAGTGAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAAGGT     600

GAATCTGTAA CTCAAGAAGC TACACCAGAG TATAAGCTAG AAAATACACC AGGTGGAGAT     660

AAGGGAGGCA ATACTGGAAG CTCAGATGCT AATGCGAATG AAGGCGGTGG TAGCCAGGCG     720

GGTGGATCAG CTCACACAGG TTCACAAAAC TCAGCTCAAT CACAAGCTTC TAAGCAATTA     780

GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAGGA CAAGCAGGAT     840

GAAATCAAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA     900

GCAGAAAAAC AAGCAGCTCT CAAAGAGATT GAAAATGCGA AAACTATGGA AGATGTGAAG     960

GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG    1020

GCTCCTAATG CTGCTCCTAA GACAACAAGT GCACCGCAAG CAACTGCAGG AACAATGCAA    1080

GATGTTACCT ACCAGTCACC TGCTGGCAAA CAATTACCTA ACACAGGTTC AGCATCAAGT    1140

GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA    1200

AAGACTAGAC GTAGAAAATA GAACAGCTAG AAAATTCTAT TCTCTACTTA AAGTTAGATT    1260

ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAGT GAGAACCCAA    1320

GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA TGTAGCCAAT CTCTTCTGTC    1380

TCTAACTGTG GAATAGGAGA TGGGCAATAT CGGATAGAAA AGATAGCAGA ATAGCTCTCT    1440
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920
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ATTGAAGAGA GGAGGGGAAA CCGAAAAATT AGGTGCCCCT CCTCTTTTTT GGTATAATAG    1500

AAGATAGAAA ACGAGGTTAG AAGAGATGAT TTTTGATACA CATACACACT TGAATGTAGA    1560

AGAATTTGCA GGTCGTGAGG CAGAAGAAAT TGCCTTGGCT GCTGAGATGG GTGTGACACA    1620

GATGAATATT GTTGGTTTTG ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA    1680

GTATGAGCAG CTCTATGCGA CTATTGGTTG GCATCCTACA GAAGCTGGTA CTTATACAGA    1740

GGAAGTTGAG GCTTACTTGT TGGATAAGTT AAAACATTCC AAGGTTGTGG CTTTAGGTGA    1800

AATTGGCTTA GATTACCATT GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG    1860

CCGTCAGATT CAGCTATCTA AGGACTTGGA TTTGCCTTTT GTTGTCCATA CCCGTGATGC    1920

GCTGGAAGAT ACCTATGAGA TTATCAAGAG TGAGGGCGTT GGTCCTCGTG GTGGTATCAT    1980

GCATTCATTT TCAGGGACGC TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT    2040

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GTTACCTTTG GACAAGATGT TGGTGGAAAC AGATGCGCCT TACTTAGCAC CTGTACCCAA    2160

GCGTGGTCGT GAAAATAAAA CAGCCTATAC TCGCTATGTG GTCGACTTTA TCGCTGACTT    2220

GCGTGGTATG ACGACAGAAG AGCTGGCGGT AGCAACGACT GCAAATGCAG AACGAATTTT    2280

TGGACTGGAC AGCAAGTAAT GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGGCGT    2340

GATGATACGG TCAATCTCAA ACGTTATTTC GATGTGGAGA CCTATGAGAC TCGAGGTTCT    2400

GCCATCAATG CTCAGGATAT AGAGCGGATT CAGCGCCTGC ACCAACGTCA TGGAGTCATT    2460

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CCAACAGTTC AGCATGCCTT TCTCAAGCGA GATGAAGCTG TTCCCAAGTC CAAGACCAAG    2580

GGGCGTTCTC TGGGAATTGA GCATGCCAGC TATGAAGACC TGAAAACGGC TCTAGCTCAA    2640

GTGACAGAAC AATTTGAACA TGAGAGTCAG TTTGACATTA GTCGTAGCGA TTTGATTCGC    2700

CTTGGTTTTC TAGCAGGGGC AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC    2760

CGAATCGGCT ATTCCAACGG CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTTACT    2820

TTGGCAGAAG TGGAAGAAGC TATGAAATCT TATGAGTAGG AAAGATGTAG CCGTTACAAT    2880

TTTTTAAGTT TCACAGTATT TTTCGAAGCA GGTAGAAGAG GAGGCGTCTG ATGTTAATTG    2940

GTCAAAAAAT TAAAGAGATT CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG    3000

ATGAGCAAGA ACTGACAGTT CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA    3060

GTTTGCCCAA GTTAGACTAT ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC    3120

CGGATTTTTC AGCTCTTCCT TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC    3180

CAATCTATGG TAAAGAAGAG GAGTACGATA AGAAGGAAGC GTGTTTGGAA GAGATTTATA    3240
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921

AAACATACTT TGATAATCTT CCTAAAGAAG AACAATTAGC ATGTGAAGTA TTGCAGGCGT   3300

GTTTGGATAC TTCTAGAACT AGAAGGCCTG AATATGCAGA GTTAATACTT GAGGAACATA   3360

TGCCTCAGAT TATAGAAAAA GAAGCTTATT CAATAAATGA TATGTTGTTG ATTCGTTTGT   3420

TTTTTTATCA AATGCTCATT AGAAAAGATC TTGCCAAATT TATAAATCAA ATCGAAAAGC   3480

TAATGCTCTT TCTTTTGGAA CAGAAGAAGG TAACTCAAAT AGAGAATTAC TTTATAATTA   3540

GAGATACTCT TATTTCAGGA ATGTGTTGTC TTGAAAAGGT AGGAGTAACT GATTGTTTTA   3600

ATGATTATCT ATCGTGTTTA CAAGAAATTA TGGATAAAAC TCAAGATTAT CAAAAGAAAC   3660

CTCTTGTATT TATGTTTTTG TGGAAGCAAG CATTAAGAGA AGAAAGAGAT TTTAGTTTAG   3720

CTGAATCATT TTATCAGTCT TCTAAAACAT TTGCGCAGCT AATTGGAGAT GAATTTCTAG   3780

TAAAGAAATT GACAGAGGAA TGGCAAGAGG ATGTCAAAAA ATATTTATAA ACATAGTGAA   3840

TCAGTGACAA AGATGTCCTT GTCCTCGTAT CAAAACAGTT CTAAAGTTCG TCTTTAGGGA   3900

TGTTTTTTTA GATATAAGCT AAAAATGACA CGAAATGGTT AGATTTTAAG GACATTGATG   3960

TCCG   3964

(2) INFORMATION FOR SEQ ID NO: 137:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12666 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT ATTTGTATTA GGGAAATGGG TATCTATTTT TAATGCTGTG GGGATTTTGA   60

TTGTTTCTAT TATTCAAACC AAAAGCTTGT CAGGTATTGG AGCAGGATTG TTTAATCTAT   120

ATAACATTTC ATCTTATATA GGTGATTTAG TTAGTTTCAC TCGATTGATG GCATTAGGAT   180

TATCTGGAGC AAGTATAGCA TCAGCTTTCA ATTTAATTGT TGGTTTGTTT CCGGGAATAT   240

TGGCTAAACT GACAATTGGA TTAGTATTAT TCATTCTTTT ACATGCGATC AATATTTTTC   300

TATCGTTACT ATCAGGATAT GTTCATGGAG CACGTCTGAT ATTTGTTGAA TTTTTTGGTA   360

AGTTTTATGA GGGTGGAGGA AAACCATTTC AACCTTTGAA GGCTTCTGAG AAATATATTA   420

AGGTTATTAC AAAGAATTAA TGGAGGATAT ATATAATGGA ACATTTAGCA ACTTATTTTT   480

CAACCTATGG AGGAGCTTTC TTCGCTGCAT TGGGAATTGT ATTGGCGGTT GGATTAAGCG   540

GTATGGGGTC TGCTTATGGA GTTGGTAAGG CTGGGCAATC TGCCGCAGCT TTACTGAAAG   600

922

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AACAGCCTGA AAAGTTTGCC TCAGCTTTGA TATTGCAATT ATTGCCCGGA ACACAAGGAT      660

TATATGGTTT TGTTATTGGA ATTTTAATTT GGTTGCAATT AACTCCAGAA CTTCCTTTAG      720

AAAAAGGCGT TGCTTATTTC TTTGTAGCTC TTCCAATTGC TATTGTAGGA TACTTTTCAG      780

CTAAGCATCA AGGAAATGTA GCAGTAGCGG GAATGCAAAT CTTGGCTAAA AGACCAAAAG      840

AATTCATGAA GGGAGCAATT TTAGCTGCCA TGGTAGAAAC CTATGCAATT CTTGCTTTTG      900

TCGTATCATT CATTTTGACC CTTCGTGTAT AAGAAATAAA TTTGCAATTC AAAGGAGGTG      960

TCTAAATGAG CAATTTAGAA AACTTACGAG AGTCTGTTAT TGAACAAGCT CATGAAAAAG     1020

GGCGTATGAA ATTATTGGAT TCCAAAAAGA AGATTGATGA TGAATTTGAA ATGCAAAAGT     1080

CGCTCATTAT AAAGAAAAAA GAAGCTGAAC ATGAACGAAA GTTAAAAGAA TTGCAACAGA     1140

AATATCAAAT AATTTTTCAA CAATTAAAAA ATAAGGAACG CCAATCAACG TTAGTATCAA     1200

AACAGAAAAT ATTAAAAGAA CTTTTTCAAT CTGCTTTACT AGAAATGGAA TCTTGGAGTG     1260

CAGATAAAGA AATGGAGTTC ATCTATCGAA TTCTGGAACG ATATTCACAA CAAGAGGTCA     1320

TAGTAACCTT TGGGGAACGG ACTTTAGCTA AATTCAATTT GGAACAATTA GAGAAATTGA     1380

AATTCTCTTT TCCAAATTAT TTATTTAGTG AACAACCTAT CTCAAATGAA TCAGGCTTAC     1440

TTATTTCAAT AGGTAAAATT GATGATAACT ATTTGTATAA AACATTAATT GGATCGATTT     1500

CTAAGGAAGA AAGTTCAAGT ATCGCAAATC AAATTTTTAT CAATTAAGGA TGAAATTGGT     1560

TAATCCTTCT TAGAAATTTG GAGTATTCCA ATAAAATTAG AAAGGTATTT TATGGATACT     1620

AATCTTTTTT CAAAAATAAA TACGACGATT TCGGTAAAAG AAAACGATTT TATTACAGAA     1680

GAAAAATTTC AAAAAATTAT ACAATCCAAA GATACGGAGA CATTGGCATT TATCTTAGAA     1740

TCAACTCCCT ATCATTTATC GATTGACATC TTAGAAGATC CTAGTCAGAC AGAGATTTCG     1800

CTAATGACAA AATTAGTCAA TGATTATAGA TGGGCCTATG CTGAAAGTCC GTCTGATATA     1860

ATTGTGACTT TATTTGCTTT ACGATATGTT TATCATAATA TCAAAGTTTT ATTAAAATCT     1920

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CGTGAAGTAG AATCAATTTG GAATGAGTAT GAAACTTTTA ATAATATTCG TGTACTTGAT     2100

GTCGGAGCTG ATCTAGCATA TTTTAAACAT CTGAAACTTT TATCTAATGA GTTAGATGAG     2160

GTACTGTCTC AGGTTATTGT CGAAATGATT GACTTTTATA ATATTATTAC TGTAAAACGT     2220

GGTTTATCTC AAAATAAGAG TCATGGGGAT ATTTTACAAT TACTTTCAGA TGAAGGAAGT     2280

ATTTCTGCTA AAGAATTTAT ATACATTGTA GAAAATCAAG AAATATTTGT GTGGTTCAAT     2340

AAAATAAATC CAAGCTTAGA TTCAATCTTT TCAACTTATG AATTGAAGAT GCAGGACGCA     2400
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923

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ACAATTTCAT CTTCTGAGTT AGAATTTTTA TGTGATTTAC TATTGTATAA AACTTTAGAT    2460

CAAGGAAGGT ACAATGTAGA GGGGCCGTTA GTTCTTGCTA GATATTTATT GGGATGTGAG    2520

TTTGAAGTAA AGAATCTCAG AATGATCATA TCAGCTCTTC AAAATACAAT TCCCTTTGAA    2580

TCAATAAAAG AAAGGATACG CCCACATTAT GGAAGCTAAT AAGTATAAAA TTGGCATAAT    2640

TGGTAGCCGT GATATTATTT TACCATTTAG CATGATTGGG TTTGATATAT TTCCTGCCTA    2700

CCAAGAACAA GAAGCTATAA ATACACTAAG AAAATTAGCT CAATCTGATT ATGGTGTCAT    2760

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AGTTGTGCCT GCTATTATTT TATTACCGAC TCATAAACAA GGTTTAAATT TAGGATTAAA    2880

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GGGAAGATTA TAAAAGTATC GGGACCTCTA GTTATTGCAT CAGGTATGCA GGAGGCTAAT    3060

ATTCAAGATA TTTGCCGTGT AGGTAAGCTA GGGTTAATCG GTGAAATTAT TGAAATGAGA    3120

AGAGATCAGG CATCTATCCA AGTCTATGAA GAAACATCTG GTCTTGGTCC GGGAGAACCT    3180

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TTTGATGGCA TACAACGCCC ATTAGATCGA TTTAAATTGG CTACTCATAA TGATTTTCTA    3300

GTTCGTGGGG TAGAAGTTCC AAGTTTGGAT AGAGATATTA AGTGGCATTT TGATTCCACT    3360

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CGTGAGGCTT CAATTTATAC AGGAATTACC ATGGCTGAGT ATTTTCGTGA TATGGGCTAC    3960

TCTGTCGCCA TTATGGCTGA TTCAACTTCA CGTTGGGCAG AAGCGCTACG TGAAATGTCA    4020

GGACGTCTAG AAGAAATGCC TGGTGATGAG GGTTATCCTG CTTATCTGGG AAGTCGTATC    4080

GCTGAATATT ATGAAAGAGC AGGACGTTCT CAGGTTCTAG GGCTTCCAGA ACGTGAAGGA    4140
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924

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ACGATTACTG CTATTGGAGC TGTATCGCCA CCTGGTGGAG ATATTTCAGA ACCAGTTACT    4200

CAAAACACTT TACGGATTGT GAAAGTTTTT TGGGGGCTTG ATGCTCCGTT GGCACAGCGA    4260

CGTCATTTTC CTGCAATTAA CTGGCTTACA TCTTATTCAC TATATAAAGA CAGTGTGGGC    4320

ACTTATATAG ATGGTAAAGA GAAGACAGAT TGGAATAGTA AAATAACTCG TGCGATGAAC    4380

TACTTACAAC GGGAATCTAG TTTAGAGGAA ATTGTTCGTC TTGTTGGAAT TGATTCTCTG    4440

TCTGATAATG AACGACTAAC GATGGAAATT GCTAAACAAA TTCGAGAAGA TTATTTGCAA    4500

CAGAACGCTT TTGATTCGGT AGATACATTC ACTTCGTTTG CAAAACAAGA AGCAATGCTA    4560

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ACAGAGATTA TGGAAGGTAC CGTGGCAGTT CGAGACCGTA TGGCGAGAAG TAAATATGTT    4680

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GATAAAGCAA TGGTTCAGCT TTTTGAAGGA TCTAGTGGAA TAAATTTAGA AAAGTCTAAA    4980

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GATATTGATG GTCAAGCTAT TAATCCTGTA TCTAGAGATT ATCCAGATGA ATTTATTCAG    5160

ACAGGGATCT CCTCTATTGA TCATTTGAAT ACTCTTGTAC GTGGTCAAAA ATTACCAGTA    5220

TTTTCAGGTT CGGGCTTACC TCATAATGAA TTAGCTGCTC AGATAGCAAG ACAAGCGACT    5280

GTTTTAAATT CTGATGAAAA TTTTGCGGTT GTATTTGCAG CAATGGGTAT TACTTTTGAA    5340

GAAGCTGAGT TTTTTATGGA AGAACTCAGA AAAACAGGAG CGATCGATCG TTCGGTTTTA    5400

TTTATGAACT TGGCAAATGA TCCTGCAATT GAGCGTATTG CAACTCCCCG CATTGCTTTA    5460

ACTGCGGCAG AGTATCTAGC TTTTGAAAAA GATATGCACG TTCTAGTTAT CATGACGGAT    5520

ATGACTAACT ATTGTGAAGC GTTACGTGAA GTCTCGGCAG CTCGCCGTGA AGTTCCAGGG    5580

AGACGAGGCT ATCCGGGATA TTTATATACA AATTTATCAA CTCTATACGA AAGGGCTGGT    5640

CGCTTAGTTG GTAAAAAAGG TTCGGTGACA CAGATTCCTA TTTTAACAAT GCCAGAAGAT    5700

GACATAACAC ATCCAATTCC TGATTTAACT GGATACATTA CTGAAGGGCA AATTATTTTG    5760

TCGCATGAGT TGTATAATCA AGGTTATCGT CCACCAATCA ATGTTTTACC TTCTCTCTCT    5820

CGATTAAAAG ATAAGGGATC TGGAGAAGGT AAAACTCGTG GAGATCATGC TCCAACTATG    5880

AATCAACTGT TTGCAGCCTA TGCCCAAGGG AAAAAGGTTG AAGAGTTAGC AGTAGTATTA    5940
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925

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GGAGAATCGG CTTTATCTGA TGTAGATAAA TTGTATGTGA GGTTTACAAA GCGTTTTGAA        6000

GAAGAGTACA TAAACCAAGG ATTTTATAAA AATCGAAATA TAGAAGATAC GTTGAATCTT        6060

GGGTGGGAAT TACTATCAAT TCTTCCTAGA ACAGAGTTAA AACGTATCAA AGATGATTTG        6120

CTTGATAAAT ACTTACCTTT GGTAGAAGTT TAATCCGGAA ATGGAGTGAT TATCTATGGT        6180

ACGTTTGAAT GTAAAACCAA CTCGTATGGA ATTGAATAAC TTAAAGGAAC GTTTGACAAC        6240

AGCTGAACGT GGACATAAGT TATTAAAGGA TAAAAGAGAT GAATTGATGA GGCGATTTAT        6300

TTCTTTGATT CGTGAGAATA ATCAACTTCG GAAAGAAGTG GAAAGTTATC TAATTGATAA        6360

TCTAAAATCC TTTGCAGTTG CTAAATCATT AAAGAATTCT CAAATGGTGG AGGAATTATT        6420

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ATCTTCTAAT AGTGAAATGG ATGATGTATT TGCTACAATG AATAGTTTAA TTTATAAATT        6600

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CAGCTTTTGG ATAAGGTGTT GCTCTATGAC AATTCATCTA TCTAGCCTAG GGGAGGTCTA        7260

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AACCCACTTT GAATTGGATC CTTTCTCCGG TCAAGTCTTT CTCTTTTGTG GTGGACGTAA        7380

AGACCGCTTT AAAGTCCTTT ACTGGGATGG TCAAGGATTT TGGCTACTAT ATAAACGCTT        7440

TGAGAACGGC AGATTGATTT GGCTAAGTAC AGAAAAGGAT GTCAAAGCTC TCACACCAGA        7500

ACAAGTAGAC TGGCTTATGA AGGGCTTTTC TATCACTCCA AAAATATAGT AGATTGAAAC        7560

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ATTTGTCCTG TTCTTATTTC ATTTTACTAT AAATCCATCA GAAAGTCGTG ATTTCTATTG        7680
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926

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AAATGAGGAC TTTCTTTTTA TACTCATCTG CTTTCAAAAA GCATTCTAGT CCATCTCCGA      7740

TTAACGATGG ACTTTATCAC CTCCTTCTCC AGTCCTTGTA TAACATCTTG GAGTTGATTC      7800

ATGACATCTT CCAAAGTTTA AAAGGCTTTA TTCTTAAATC CACGTTTACG AATCTCTTTC      7860

CACACTTGTT CAATGGGGTT CATCTCTGGT GTGTATGGAG GAATAAATGC AAAGCCAATA      7920

TTAGTCGGAA TCTTTAAGGT ACTTGATTTA TGCCATATAG CATTGTCCAT AACGAGTAAA      7980

AGATAATCAT CTGGATAAGC TTGTGAAATC TCCTATTCCT AAAGCCCCTT TAGCGCATAA      8040

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CAATTATCGC CAAGAAGAAG ATTGGGCTAG GATGGGTTTA CCAATCACAC GTAAGGAAAT      8160

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GAGTGATAGT CAGCTGACTT ACTATTGGAC TTTTTTGTCA GGTAAAGCAG AGAAACAAGG      8340

GATTACGCTT TACCACCATG ATCAGTGTCG AAGTGGTTCA GTAGTACAAG AATTCCTAGG      8400

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TTAGGAGCTA AAGGTTTAGC TTATTGTGAT CAGTTATTTT CCTTGGAAAG AGACTGGGAG      8700

GCTTTGCCAG CTGATGAACG ACTACAGAAA CGTCAAGAAC ATCTCCAGCC CTTAATGGAA      8760

GACTTCTTTG CTTAGTGCCG GCGTCAGTCA GTTTTAGCAG GTTCAAAACT AGGAAGGGCA      8820

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TCAAAGTTTT GAAGGAGCTA AAGCAAGAGC TATTATTATG AGTTTGTTGG AAACAGCTAA      9060

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GGAAACTCTC GTAAACAAAG AGGTTTTAGA GGCTTATTTA CCATGGACTA AAGTTGTACA      9180

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GCAAGTAAAC AACTAACCGA TGCACGATTT AAGCGTCTTG TTGGTGTTCA ACGCACGACT      9360

TTTGAAGAGA TGTTAGCTGT ATTAAAAACA GCTTATCAAC TTAAACACGC AAAAGGTGGA      9420

CGAAAACCTA AATTAAGTCT AGAAGACCTT CTTATGGCCA CTCTTCAATA TGTGCGAGAA      9480
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927

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CGGAGCCAAT GGGTTGAAGT AACTCTTGTT CAAAGTGGTG TTACGATTTC AAGAACTCCT    9600
CTCAGTTCTG AGGACACGGT AATGATTGAT GCGACGGAAG TAAAAATCAA TCGCCCTAAA    9660
AAAAGAATTA GCGAATTATT CTGGTAAAAA GAAATTTCAC GCTATGAAGG CTCAAGCGAT    9720
TGTCACAAGT CAAGGGAGAA TTGTTTCTTT GGATATCACT GTGAACTATT GTCATGATAT    9780
GAAGTTGTTC AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG    9840
TGGTTATCAA GGGCTCATGA AGATATATCC TCAAGCACAA ACTTCACGTA AATCCAGCAA    9900
ACTCAAACCG CTAACAATTG AAGATAAAGT CTATAACCAT GCGCTATCTA AGGAGAGAAG    9960
CAAGGTTGAG AACATCTTTG CCAAAGTAAA AACGTTTAAA ATGATTTCAA CAACCTATCG   10020
AAATCATCTA AACGCTTCGG ATTACGAATG AATTTGATTG CTGGTATTAT CAATCATGAA   10080
CTAGGATTCT AGTTTTGCAG GAAGTCTATT ATCAAAAATA CCATCAAGAT TATATAAGAT   10140
TGATACAGGA AAAGTTTTAT TTGATGGTGT AAATATTAAT CAAATAGATA AAAAAATATT   10200
AAGTCAAAAT TTAGGAGTAG TTCCACAGGA TTCATTTTTA TTGAACCGAA GTATTCTTGA   10260
TAATATAACT TTAAAGCACG AAGTTACTTC ACAAAAGATA GAGGAAGTTT GTAAAGCAGT   10320
TCAAATCTAT GATGAAATCA TGGCTATGCC GATGAAATTT AATACTATCA TCTCAGAGAT   10380
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AAGAATAACA AAGTATATAC AAAGTCAGGG CTGTACTCAA ATAATTGTAG CTCATAGATT   10560
GTCAACGATT AAGGATGCGG ATGTTATTTT TGTAATGAAA GGTGGTAAGA TTGTTGAGTC   10620
AGGAAATCAT AAGTACTTAA TGGATCTTGG TGGAGAGTAC TACAGCTTAT ATACAAAAAG   10680
GAAATGAGGT GTAAAGAAAA TGAAGAAAGA AAATGAATAT GTAATTTTAA CAACAGCCTC   10740
ACTAGGGGTG ATGATTGGAA TAGTGTTTGC AATTTTTTTA GATTTTCCAG TTGAATATGG   10800
TATTTCTTTA GGCTTGTTGA ATGGAATAGT ATTGGGTTCG CTGATTGTTT ACAAAAACAA   10860
TAAGAATTAA GCATAATTTT TTGCTGTAAA CTAAGGAGTA GAGATGGCTA TAGTTGAAAT   10920
TATAAATCTA ACAAAAAGCT TTAAAGATAT TGAAGTTATT CATAACACTT AAATAATAGA   10980
GCAACTACAG TAGTAGCTTA AAAACATGAT TAAATCGCTA TTCTTAGGAG TAGCGGTTTT   11040
TCTTTTTGTT TAATACTCTT TGAAAATCTC TTCAAACCAC GTCAGCTTTG CTTTACCGTA   11100
CTCAAGTACA GCCTGCGGCT CGCTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATAAAA   11160
AGGGTCAAGT AAGTATAGTA AATTGAAATA AGATATGAAC AAATCGATTA GAAAAGTCAA   11220
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928

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ATTAATTTCT AGAAATATGT TAGAAATTGG TTTGAATTCC GCAATCAATT TGTTCAGTTT      11280

TTATTTCATT TCATTTTATT TAATTAGATT TTCCAATTTT TTAATTCAAG CTAAAAATCC      11340

CCAATCGTAG TGATTGAGGA TTGAGTAAAT AAATCTTAAA CAATACCTTG TGCAATCATG      11400

GCATTTGCTA CATTTTCAAA GGCAGCAATG TTAGCTCCTG CAAGGTAGTC TTTATCAAGA      11460

CCGTATGTTT CTGAAGTCGT TTTAGCTGTG TTGAAGATGT TTGTCATGAT GTCTTTGAGA      11520

CGGCCATCAA CTTCTTCACG AGTCCATGAG AGGCGAAGAC TGTTTTGGCT CATTTCAAGA      11580

GCTGAAACGG CTACACCACC AGCGTTGGCA GCTTTTGCAG GTCCGTAGAA GATACCATTT      11640

TCTTTGTAAA CTTTGATGGC ATCAAGGTCG CTCGGCATGT TGGCACCTTC AGATACACAG      11700

ATAACGCCTT GAGCAACCAA ACGTTTAGCT GCTTCACCGT TGATTTCGTT TTGAGTGGCA      11760

CATGGAAGAG CAATGTCATA GTTTCCAGCG TAAGTCCATA CAGTACCTTC GTGGTAGGTT      11820

GCAGTTGCTT TTTCAGCTGC ATACTCAGTC AAACGAGCAC GACGTTTTTC TTTAACATCA      11880

ACCAAAAGAT CGAAGTCGAT ACCATTTTCA TCGATGACAT AACCATTTGA GTCAGAAACA      11940

GAAATAACAG TTGCACCGAG TTCAGTTGCT TTTTGAAGAG CATATTGAGC AACGTTACCA      12000

GAACCTGAAA TAACGACTTT CTTACCAGCA AAGCTGTTAC CGTTAGCTTT GAGCATTTCT      12060

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CCAAGAGGTT TACCAGTCAA GACACCAGCA TCAAATTGGT TAAGACGTTT GTATTGACCG      12180

TAAAGGTAAC CAATTTCACG TCCACCAACA CCGATATCAC CAGCAGGTAC GTCAAGTGAT      12240

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TCTGTTTTAC CTTTAGGATC GAAGTCTGAT CCACCTTTAC CTCCACCGAT AGGAAGTCCA      12360

GTCAAGACAT TTTTAAAGAT TTGTTCAAAT CCGAGGAATT TCAAGATCCC TTGGTTTACA      12420

GTTGGGTGGA AACGAAGTCC ACCTTTGTAT GGTCCAACAG CTGAGTTGAA TTGAACACGG      12480

TAACCACGGT TTACTTGAAT TTTTCCATCA CGGTCAACCC AAGGAACACG GAAAGAAACC      12540

ACGCGCTCAG GCTCAGTAAT ACGTGCCAAG ATATTTTCTT CGATATACTC AGGGTGTTTT      12600

TCAAATACAG GTTCTAAAGT GTTGAAAAAT TCTTCAACAG CTTGGAGGAA TTCAGCCTCG      12660

TGCCGG                                                                 12666
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(2) INFORMATION FOR SEQ ID NO: 138:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3083 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

929

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

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AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTTAATAGA GCCATTTTGA        60

CCAAAAATCC CGATAAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA       120

ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGGTCA AAAAGAGGGC CGTCGGATAA       180

CTGATAAGCA GTGCCACAAA GGTCACAATG CCTGCATAAA GCACTGAGTT GAAACTCATT       240

TTAAGATAGG TCAAGTTTTG TGACGCAAAG TAAGATTTGT AATTTTCTAA ACTGAACTGG       300

CCTTCGATGT TGAAAAAGGA TTGACCGAAA ATCAAGACCA AGGGTGCCAA TACAAAGAGC       360

GCAATCCAAA GCATGTAGGG TACTACAAAG AGTTTAGAGC TTGTTTTCTT CATCTCTTTC       420

CTCCTCGATT GCATTGATCA AACCTGCTTC TTGCTCTTCG ATTTCTACGT ACTCCTCAAT       480

ACGAGCATCG AACTCTTCTT CGGTTTCATT GAGACGCATG ATGTGGATGT CTTCTGGTTC       540

AAAGTCCAGA CCGATTTCCT CACCCACGAT AGCCTTACGG GTTGAGTGGA TCATCCATTC       600

ATTTCCAAGT TCGTCATAGG CGATAATTTC ATAATGAACT CCACGGAAAA GCTGGGTATC       660

GACCTTAACT TGGAGCTTGC CTTCTTCAGG AAGGGTAATG CGCAAGTCCT CTGGACGAAT       720

AACGACCTCA ACAGGTTCAT TTGGCTTCAT CCCACCATCA ACCGCTTCAA AGCGTTTGCC       780

GTTAAATTCG ACCAAGTAGT CCTCAATCAT GGTACCTGGC AAGATGTTTG ACTCCCCGAT       840

AAAGGTGGCA ACAAAGTGGT TGATTGGCTC ATCGTAGATG TCCACAGGGG TTCCAGACTG       900

GACAATCTCG CCATCATTCA TAACGAAAAT CCAGTCACTC ATGGCAAGAG CTTCTTCCTG       960

ATCGTGAGTG ACAAAGACAA AGGTAATGCC CAATCGTTGT TGTAATTCAC GCAATTCGTA      1020

CTGCATGTCT GTTCTCAATT TCAAGTCCAG CGCTGATAAA GGCTCGTCCA ACAAGACCAC      1080

ACGGGGTTGG TTGATGATAG CACGGGCGAT GGCCACACGC TGACGTTGTC CTCCAGAAAG      1140

TTTGCGGATG GAACGTTTTT CATAACCTTC CAACTGAACC ATCTTGAGAA CTTCCGCTAC      1200

ACGCTGCTCG ATTTCTTTCT TATCAATTTT ACGCAAGCGA AGTGGAAAGG CAACATTTTC      1260

AAACACATTC ATATGTGGGA ACAAGGCATA GGATTGGAAG ACGGTATGTA CGTCGCGCTT      1320

GTTGGTTGGA ATATCATTGA TACGAACACC GTCTAGCATG ATATCTCCTG TCGTCGCATC      1380

CAGTAAACCT GCAATAATGT TTAGGATAGT TGATTTCCCC GAACCAGATG CACCTAGAAG      1440

GGTGTAGAAT TTCCCTTCTT CCAACTCAAA GTTGATGTCT TTGAGAACCT TGGTGTTGCT      1500

GTCTTCAAAA ACTTTAGAGA CGTTTTTGAA TTCGATAATT GGCTTTTTCA ATTGGCATAA      1560

ATTCCTTCTT TTTCATAGAT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC      1620

AGGGAGTAAA ACCACCTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA      1680
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930

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CTTCTCTTTC AAGCGTAATA CCTGAGTGTT CCTTGACTTT TTCGATAACC GATTGGATCA    1740

AGTCCTCGTA GTCTTTGGCC GTTCCATCTG CGACATTGAT CATAAATCCT GCATGCTTTT    1800

CTGACACTTC TACGCCACCG ATACGATAGC CTTTCAAGCC AGCTTCTGAA ATTAACTGAC    1860

CTGCAAAATG CCCGACTGGA CGCTTAAAGA CCGAGCCACA AGATGGGTAT TCCAAAGGTT    1920

GCTTGAGTTC ACGTAGGTGC GTCAAGCGGT CCATTTCCTG CTTGATAACC TGATGGGTTC.   1980

CTGGAGCTAG GGCAAATTTA ACTGACAAGA CAACTGCACC AGACTCCTGA ATAGCTGAAT    2040

GACGGTAACC AAAAGCCAAG TCTTTAGCAG ACAGGGTTTC GATTTCTCCA TCCTTGGTCA    2100

AGACCTTACA AGACTGCAAG ATGTGAGCAA TCTCGCCACC ATAGGCACCC GCATTCATAA    2150

AGACAGCACC GCCAACGCTT CCTGGAATAC CACAAGCAAA CTCAAAGCCA GTTAAACTAT    2220

GACGGAGGGC AATGCGAGTT GTTTCAATCA AGTTAGCCCC AGCTTCTGCT TCAATGGTAT    2280

AGCCATCAAC AGAAACGTTA TTGAGCTTGT CACACAAGAT GACAAATCCA CGAATCCCAC    2340

CATCACGAAC GATGATATTG CTTGCATTGC CAAGAACCAT CCAAGGGATA TTTTCTTGGT    2400

TGGCAAATTT CACAACGCGA GCCAACTCAA AACGATTTCG TGGAAAGACC AAATAATCAG    2460

CCTCTCCACC TACTTTTGTA TAACTATAGC TATGCAAGGG TTCCTTAAAA CGGATATCAA    2520

TTCCTTCTAA GATTTCAAGC ATTTTTTCTC TTACAGACAT GTCACTCTTC CTTTTTACAAA   2580

ATTCATTCCA TTATACCATT TTTAGAGACA TTTGACGACC ATAAAAATAC CTTGTTTGGA    2640

TTTTGCATAA GAAAAAGAGG TTCCCCCCTT TTTATGATTT TTTACAAAAG ATTTCCTTGG    2700

TTCCATAGGC GACCAGAACG AGCTCCAGTG CTAGAATCAC TTCAACCAAG ACTGGATTTG    2760

TCAACCAGCC TACTTGGAAA AGAGATGGTG CCAGATCAAA GAAGGCATGC AAGCCATAGG    2820

CTGCTAGGAG ATAAATCCAT TTCTTCTGGC GAACAGCTTG GTAAACCCAA ACTGTCAAAA    2880

GTAATTGGAA ACCAAGCGCC AAGATTCGCT CAAAACCAAG CAAATAAATC TGCCAGACCG    2940

AAAGTGACTG AATGGTTTTT AACATATTTT CAGACAGTAA TTGCATAACC TGTGGATTC.    3000

GAGTTTGAAC TGCCGAAAGA ACAATGTAAA GATTGAGTAA ACTAGTAAGG CCTAGAAAA     3060

TCAACTCCAA GCCACCATGC CCC                                           3083
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(2) INFORMATION FOR SEQ ID NO: 139:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 15363 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

931

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CCGGAGGATA TTGACCACCA CCAAAAGCAG GGGGAAAATC GAAATCAACC AATAGTAGGC        60

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TAAAGGTTTG TCTATCAGCT CTTTCCACCA CTTTTTTCATG TCATACTCCT TCACTTATAA      180

TCTTATACTC AATGAAAATC AAAGAGCAAA CTAGAAAGCT AGCCGCAAGC TGCTCAAAAC       240

ACTGTTTTGA GGTTGTAGAT AAGACTGACG AAGTCGATCA CATACATACG GTAAGGCGAC      300

GCTGACGTGG TTTGAAGAGA TTTTCGAAGA GTATTAACTA ATTTCTTCTT ACCAATTCCA      360

CCATATCATA CGGTAGGGTA TTGGCAGCTT CCTTCAAGGA ATAGTTCTCT AAGTTATTTA      420

CATTTTGTCG TAATTTCTTG GCATACTTAG TCGTAATCAA TCGTTTTTCT TCGTATTCGA      480

AAATCAACTT GCGCTCCAGA TAATAGCCTC TCAGCATTTC ATCGATATTG TTGGGTTTGA      540

CACGATTGAT AACCCGTTCG ACAAAGGCAC CACTGCTGAT AATAGCTGTT TCTCGAAGAC      600

GAGACTCCTG CATAAAACTA ATCAAAGAGC GTCTGTAGAC TCCCTTCAGG TTTTCCAAAC      660

TTTCAATAAT CATCTCTGTA TTGGCAAGAT AGAGCTCTGC AATTTGGTCA TAATCAAGAG      720

CACGGAGACG GCTTTGCTCC TTGTTCTTCC AGCTACGGAA GGTCTTTCCG AGAGTAAAAA      780

CTTCATGAAG GAGAAAACGT AAAATCCTCA AGGAAACAAG AAAATAATAG GTCAGTCTTG      840

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AAGCACGATT GCTAATGTTC CCCTCTTCAT AGGCCTGTTC CAAACCATCA CTTTCAATAC      960

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TTCTGGTGTC TTCCAACTCT TTTTCCAACT CTAGCGTTAC TTCATTCAAA ATGGCGATAT     1140

GCATAAGATA ATCCTTGCTT TCTTCCTCTT CATCAGAAAG ATGAGGCAAG ACCAAGAGAC     1200

CTGTTAAAAA GCTAACAAGC GTCACACCTG CAACAAGGAA AAGCAAAAGA GGATACTCCT     1260

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TCACTGTATG CCAGACCGTC TCGGTCACCG TATCCACTTG GGCTTCGAGG AGCGTGATTT     1620

TCTTGAAGCG ACTTGCCTTT AAAATTCCAG CAACTACGAC GGCAATAATA CCTGAAACAT     1680

GAACTTCTTC TGCCAGAAAG AAGGTCACTA GAGGCAAACT CAATTCTAAT AAAAGTTCAC     1740
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932

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TGGCAATATC CGTTGCGCGC ACACTTAGCA AGAAGGTATG GAGGAAGCGG TTGGTCATGG    1800

CTGTTAAAAA TCCAATTAAA AAACCGCCTA GGATTGAAAA GATGAGCGAA CTGCTAGCTT    1860

GCCCCAGAGA AAAAGCTCCA GTTGTCCAAG CTGTCAAAGC TACCTGAAAA GCCACCAAAC    1920

CAGAAGCATC ATTCAAGAGT CCTTCGCCCT TAAGAATATT GGACACGCGC TTAGGAAAGC    1980

TAAAACGCTC CGAAAGAGAG GCAAAGGCCA CCAAGTCCGT AGGACCAAGG GCTGCCCCAA    2040

CAGCCAAGCA AGCTGCCAAG GGAAGGCTGA ACCAAAGAAG ATGGGCCAAG CCACCCAAAC    2100

TCAGGGTCGA GATAAAAATC ACTGGAAATA TGAGATAAAC AATGATTCGC CAGTGTTTTA    2160

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CCAAAAACAA CTCCGTATTA AGGTGAAAGT CAGTATTGGG TAAAAAGAGA CCAATCACAA    2280

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TTGAGACAAT CAAAACCAGT AAAAATAGGA TGAGGTAAAT CAGTAATTCC ACGCACGTCC    2400

TCCTTAATCT TTTTTACAAC AGGATTCAAA TATCTCCTTC TGCTCTTTGA TTTTTTGGTC    2460

AATCTTGGAA CAGTCTTTGT GCTCAATTTT TCTCTGGCAC CGTTCCATTT CAAGAGCAAC    2520

TAATTTTTTC TTGATTTTAA GCATTTTTTT GCTCATATGC GCTTGGTCTA GCACGCCCAT    2580

CGCTCGTTCG TGGTGGGTTG ATTCAACAAA ATTCTGGCGC ATGGCATCCA GCTTTTCGTG    2640

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GGTTGTTGAC TTGGTTTAAA GTTCGGTAAA TGGCAGCTGT GTACTCTTGT TGGTTCAACT    2760

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TCATAATAGC AATTCGTCCA CCTTTGACAA GTAAGCCACA TAGCTTTTCT AATGCCTCAA    2880

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CATGTGCCAT CTCAAGTGGT CTTTTCATTT TCAAACTCCT GTTTTACAGC CTTGCATCCT    3240

TGAACACTTC CACGACGTCG CATCTCCATC TCAATGCTGT TGAGGACTTC CCATTTATTG    3300

AGGCTCCACA TAGGACCAAG CAGCATATCC CTAGGCGCAT CTCCTGTAAT TCGATGGATG    3360

ACGATATGTT TGGGAATAAT TTCCAGTTGG TCACAGATGA CCCTGACATA TTCGTCCTGA    3420

CTCATCAATT GTAAACGCCC CTCATGGTAA TCTCGTTGCA TACGAGTATT TGTCATAAGA    3480

TGGAGCAAAT GCAGTTTAAT CCCTTGAATA TCGTTATCCG TGACACAACG GCGGACATTT    3540
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933

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TCAACCATCA TCTCATGGGT TTCACCAGGC AAACCATTGA TCAAATGGGA AACAATCTCA      3600

ATTTTTGGAT ACTTTCTCAA ACGCTTGACC GTTTCCACCT ACAATTCATA AGAATGCGCA      3660

CGGTTAATCA GGTCAGAGGT TGCTTCATAA GTAGTTTGCA AGCCCAATTC AACCGTCACA      3720

TGCATGCACT CCGATAACTC AGCCAAATAT TCGATGGTTT CGTCTGGTAA ACAGTCTGGG      3780

CGCGTTCCAA TATTGATTCC TACCACACCT GGCTCATTGA TAGCCTGTTC ATAACGCTCT      3840

CGAATAACTT CCACCTTTTC ATGGGTGTTG GTAAAATTTT GAAAATAAAC CAGATACTTC      3900

CGAACATCCG GCCACTTGCG GTGCATAAAG TCAATTTCCT TATAAAATTG CTCACGGATA      3960

GGCGCATCCG GTGCCACAAT GGCATCTCCA GAACCAGAAA CCGTACAAAA AGTACAGCCC      4020

CCATGAGCCA CAGTCCCATC ACGATTGGGA CAATCAAATC CCGCATCAAT AGGGACTTTA      4080

AAAGTCTTTT CTCCAAAGAG TTTTCGATAA TAATCATTCA AGGTATTATA AGATTTCATG      4140

ACTTTCATTA TAACAAAAAT CACCCACAAT CTCAAAAGCC TGACTTTCCT ATAAATTCCT      4200

CTGTTTCTCG TTTCCATTAG CCTTTTTTTA TGATACAATA TGGGTATGAT TTTAATGAAA      4260

TTAGCATCTA TTTTATTATT GATACTGACC TTAGTCGTCT GCATTATCCT AACCAAACTT      4320

TTTAGATTAA AAAAACTAGG ACGAAACTTT GCGGATTTGG CTTTTCCAGT CTTGGTATTT      4380

GAGTATTACT TGATTACAGC TAAAACCTTT ACCCATAATT TCCTCCCTAG ACTGGGGCTA      4440

GCCCTCTCGA TCCTAGCCAT TATTCTCGTC TTTTTCTTCC TTTTGAAAAA ACGCAGCTTT      4500

TACTACCCTA AATTTATCAA ATTCTTCTGG CGTGCAGGAT TCTTATTAAC CCTTATCATG      4560

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AGGGATTTTT GCTTTCTCTA CAAAATAGTA TAGACAATAA CACTATACAA TTTTATACAA      4680

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TTTTTGGATG GTTACGATAG TCTTGGTAAA ATAGAATTGC CCAATAAACC ATTTAGAAAG      4800

GCTATCCCAT GCATATTCAC TATAACACAA ATCAAACAAC TTTACCACTA GAAATCAGTT      4860

CCTTCTTACC ACAAGATCAT CTCGTTTTTA CTATTGAAAA AGTGGTGAAT ACCTTGGAGG      4920

AACGTCACTT CTACACCTCC TATCATGCCT TTGATCGCCC GTCTTATCAC CCTAAAATGC      4980

TTGTATCTAC TCTTCTATTT GCCTATTCAC AAGGGATTTT CTCTGGTCGA AAAATTGAAA      5040

AATGGAAGAG TTAGTGACCT TAGATTGTTT GTTTATTGAC AGAACTAAGA TTGAAGCCAA      5100

TGCCAACAAG TATAGTTTTG TGTGGAAGAA AACGACAGAG AAATTCTCCG CCAAACTTCA      5160

AGAACAGATA CAGGTCTATT TTCAAGAAGA AATCACTCCC CTTCTGATTA AATATGCCAT      5220

GTTTGATAAG AAACAAAAGA GAGGGTATAA AGAGTCAGCT AAAAACTTAG CGAATTGGCA      5280
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934

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CTATAATGAC AAGGAGGATA GCTACACACA TCCTGATGGC TGGTATTATC GTTTTCACCA    5340

TACCAAATAT CAGAAAACAC AGACAGACTT TCAACAAGAA ATCAAGGTTT ACTACGCCGA    5400

CGAACCTGAA TCAGCCCCTC AAAAGGGACT GTATATGAAC GAACGCTATC AAAACTTGAA    5460

AGCTAAAGAA TGTCAGGCGC TTTTATCTCC CCAAGGTAGA CAGATTTTCG CTCAACGCAA    5520

GATTGATGTG GAACCTGTCT TTGGGCAGAT AAAGGCTTCT TTGGGTTACA AGAGATGTAA    5580

TCTGAGAGGG AAGCGTCAAG TGAGAATTGA CATGGGATTG GTACTTATGG CCAATAACCT    5640

CCTAAAATAT AGTAAAATGA AATAAGAACA GGACAAATCG ATAAGGACAA TCAAATCGAT    5700

TTCTAACAAT GTTTTAGAAG TAAAAGTGTA CTATTCTAGT TTCAATCTAC TATACAATAA    5760

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GGTCTTTAAT GATAAAGAAG GTATCAAAAT TTCTAGTCTT CTTTTTTACC TTTAGTAACT    5940

ACTAATCCTG CACTCAAACC TAGAAGAGTT AAACCTGCTG CTACTGCTGC TTGGCTTGCC    6000

GCACTACCTG TACTTGGTAA CTGGGCTTTA TTAGTTTGAC TAGCTTCACT TGAATCAATT    6060

GGTTTTGTAT CTGCTTTTTC TGACACTTGT GGTTTTTTAG CTTCTTGAGC TACTGGTTTG    6120

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TCTACACGAG TTTCACCTAG ATACAGTGTT GAATCTTTTT TCTCAACTGT CTTGTATGCC    6300

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TGAGTGCTTT CTTGAGGCAA TTCACTTGGT GCAAGGAAGG TCATCTCAAT CATCGCAACA    6660

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TCCGTACCAC TATCTGCAAA GAACTGAACT TTTCCTTGTG TAACAGTCCG TTCTACAATC    6960

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GACCAGTTTG TCCAACGACG ATTTTCTGAA TGATCTCCGT CATTGAGATA GTCAACGCGG    7080
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935

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TCATAGTTAG GGTTATCTGA AAGAGTCTCA CCAAGTTTGT CTGTCACTCG TACAGTGATC     7200

TCAGCAACAA GGTTACTACC AAGGACACGG CCTCGAACAG TAAATTGACC TGCTTTTGTC     7260

AGATTTTCCG CTGGAACTTC TTCCCATTCA ACTGTCAGGT CTTTTGTTTC GTAGCCGTCT     7320

TTACCTGTGA AGTAAACTGG AACCTTAGTC GGCAATTCAA GTGCTTGACC TACTTGTAGC     7380

AAGCGAGCTT GTTTAACCGC AGCAACTGGT TTATGAGAAA GTAAGCTCTT ATCCTTAGTG     7440

AAGTGCAGAC GGTATTCTCC TAAGATGTCG CCATTTTCAG CTTTCGCGAT GACACGAACT     7500

GGCTCACCTT CACGAACGCT TGGAACGACG GTAGCGAGAC CATTGTTGCT AACACTTGCT     7560

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ACCATGCGAA TACGAACAGC ATAGGTTTCA ACTTTATCAA AGCTAAAGTG GTTCATTTCT     7800

CCAGCCTTGA GTTGAGCAGG GGCTTTTAGA TTAGTAACTG GTTTCCAGTT GGCAGAATCA     7860

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GTGAGTTCAA CTTGGTCTTT AGCTCCCTCA TATTCAGCGT TCAGAGTGAC TGCTCCTGGC     8760

TTATGCAACT CAAGCATTCC TTTACGAATT GCGACTTCCC CTTCACCACT TGTAGAGAAG     8820
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936

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GTTACTTTAT CAGCTGGTAA TACAGCTTGC GTTCCATCTT GATAGTGAGC TCGAACCGAC      8880

AATTTGACAG TTTGGTCTTC TTTGAGACTG TCAGCTTTTT CCACTTGCAA GCTCAAGTGA      8940

GCAATTTTTG GCGCTTCTTC AAGGAATTGA ATTGCATAGG TTTGAAGAGG GCCACCATCT      9000

TTAGGCTGAA TAAAGATGCT CGCACGCATG CCGTTTGCTG CGCTTGCTTG AAGAACTGTA      9060

ACAGCTGCAT TTTTAGCACT TGCTGTGACT TCTGGCAACT TAGCTCCATA AGCAAGAGTG      9120

CGGTATTGCA TTGGTTTTTG ACTAGTAAGA CCTGTTACTG CCTCACCACC AACCGTTACA      9180

GTTGGTACTG CAGGTGCCGC AGGATTGCCT TCTTCTACCA CAAGGGTTGC ATGAATTGGT      9240

TGACCTTCTA AATAACCGGT CGCTTGAATA CGAGAACCTG GAATTGCTAA CTTAGCTTTA      9300

TCTTCTTCGG CAATCTCCCA CTTGTCCACT TCATACTCTT CAACACTTCC ATCAATCAAA      9360

ACATAGGAAA CAGATTTGTC TACAGAATTC AAGTCAGTAT TTGGAGCAAT ACGTTTCACA      9420

ACTGGTAGCT CTGATTTAAG AGCAATCACT TCTACACGAG CTTCTACTTC TCGTCCGTCA      9480

GCCATACCTT TCACCGTTAC AATACCAGGC TTGCTCACAT CTACTGAAGA CCAGGTTACA      9540

GGACGTTCTG CACGGCTACC ATCACTGTAT ACAAACGGAA CAGTGGTAGG CATTTCAGGT      9600

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CCTTCTTTCT TACCAGTAAA GACAGTGACT TGGTTCGATT TCAAGAGATC AGAGTGGGCA      9720

GTCAGGGTGA ATTTCCCTGC TTGTTCAGTT GATTTGACAA TGGCAACACC TTTACCATTA      9780

AATGCTTTAC GAATCCAAGA ACCATCTGCT TGCGCCTTAT AGCGTTCACG GCTGGCTTGT      9840

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TGATTTTGGT TGTGCCATGG TGTAGGTTCA CCAATATAGT CCGTACCTGT CCAGATAAAC     10500

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CAACCCACAC GATCATTTCC ATAATCTGAC TGTTCATAAT TACGCTCAGG TCCATTGCTA     10620
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937

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TGTTTCAATT CACGTTCAGG GCGATAGTAA CTTCCACGTG TACGGGTAGC TGAAGATGTT    10680

TCTGATCCAT AAATCAACCA TTTTGGATGC TTAGCTCTAA GGGCTTTGTA ATTATCTTCA    10740

GAATAGTTAA ATCCAACAGC ATCGAGTTCA TCAGCAATTT TCTCATGCCC TCCGCTACCA    10800

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TCTTCCTGAA CGAGTAAACC TAGTTCTGCT GCGATTTGCA AGGTTTGCTC ACTAGCAGGG    11160

TTGTGGGTTG TACGGATGGA GTTAACTCCC ATCTCCTTCA TTTGTTTGAG ACGGCGATAT    11220

TCTGCTTTAT AGTTTTCTTC TGCTCCAAGC GCCCCATGGT CGTGGTGCAA GGATACTCCA    11280

TGGAATTTAA TACGTTCACC ATTCAAAGAG AAACCTTCAT TTGGAGTCCA GTGATAGTAA    11340

CGGTAACCAA ACAAATCCTT CTTAGCATCA ACCAATTGAC CGTCACGGTA AACACGCGTA    11400

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TGTTGTTCTT CAAGTTTTGG TGTTAAAATA GTTGTCCCAT TTTTCTCAAC ATGCACCTTA    11700

TCTGTCACTT GTAAAGTCAC ATCACGATAG ATACCACTTC CTGAATACCA ACGGCTACTT    11760

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TGATTCACTT CTTCATTTGT TACAGCTTTA GCATCTTCCT TGAGCGGTTT TTCTTGATTT    12240

GAAGCTTGTG ATTCTATCCT TGGAGCTTTT TCTTCCGGTT TAGCAGACAC TTTTTCCTCT    12300

TTTGGAGTTA CGGCTTCATC TTCTTTCTTC TCAGATGCAA TAGCCTCAGT TGAACTAGGT    12360
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938

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TCACTTTGTT CTGTCCTTTC AACTATATTT TTAGTTTCCA AAGCTTTATC AGCCTTTTCT    12420

TCTACTATCA TTTTTTCCTC TTTAGGTTTC TCAGCAGTAT GAGTAATAAG TGTTTCATCC    12480

GCATAAACTA CAGATTCTCC AGCTATATTT CCTCCTAATA AAACTGCACA AGTCCCAATC    12540

ATTACTGAGC AAGCTCCCAC AGCAAACTTA CGAATGCTAT AAACTCTTTT CCGATTCCAA    12600

TGGCCTTTCC CCATAAAACC CTCCTTATAT TATATTTAGT GCAGTTAGCT ACTACCAAAG    12660

CCCAAGTGGT ATACATGGTA TGACAACCTA GTTTCAACAA TTTACACTCT GCGAAAATCC    12720

AATTCAAACT TCGTCAGTGT CGCCTTGCCG TAGATATGAT TACTGACTTC GTCAGTTTCA    12780

TCTACAACCT CAAAACCATG TTTTGAGCTG ACTTCGTCAG TTTCATCTAC AACCTCAAAA    12840

CCATGTTTTG AGCTGACTTC GTCAGTTTCA TCTACAACCT CAAAACCATG TTTTGAGCTG    12900

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AGCATCAAAG TCATATTTAT CAAGGCCTGG GAAGAATTTT TCAAAAATCT TATCCAAAAC    13860

CATGATAACT GGGTTCATCA TGTAGTTCAT GTGAGTTGAT GTCATTGGTG ATGAACTTGG    13920

GGCGTTAAGA AGGTCATCAA ATGTAGGTTT CATCAAGTCA GAGTTGATAA TTTTCAACAC    13980

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GTTATCAGCA TACCATTTAA TCAAGAGACC TGTGATAGAC AAGTGCCAGA TATCAAAGAT    14100

ATCGACATCA AGTGTATCTG TTTTCTTCAT AGCTAGCATC ACTATGTTGA CAATCAACAT    14160
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939

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GATGAGCAAG AAGTATAGTG TCCAAGCAGA ACCCCAAGTG ATTGTAGCAA GTGGTGCCCA    14220

ACCAACGTCG GTAATACTCA ATTGGATACC AGTGTTTTCA ACGAATTTTG CTAGTGATGC    14280

TGAGAAAGCA GTGTTTAGCA TACCGATGAT AGCACCGATA CCTGTAAGAG CGATGGCAAG    14340

TTTGATACCA CCTTCAAGCG CTTTGGAGAA TTTCACTCCA AAAAGTAAAG CCAATACTGT    14400

CAAAATGATT AACATGATGA CAGGTCCACC CATTTCTAAG ATGGGATTGA AAACCTTTCC    14460

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ATGAACAATA TCTGTGTGAG GAATCGCTAC ATTTGGCAAG TCCTTTCCTA GAAATTCCAT    15180

ATCTAAACCA GTTGGAAATG ACTTTTCACG CGTGATCAAG GCTTCACGAT AAGTTGGAGT    15240

GACAATTTCT CGTTCTTCCA ATAAAGTTGC AACCTGATCA AAGAGTTGTT CTTGACTATC    15300

CGCTTCTAAG CAAAACACAA GGTTTTTGTC AAAGAAATAA TCTAATACCA TAAGTTTTTC    15360

CGG                                                                  15363
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(2) INFORMATION FOR SEQ ID NO: 140:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 28882 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

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TAAGACTATT TAATAGTGGA GTGAAATAGG ATACGAACAA ATTGATTAGG AAAATCAAAT      60

GAATTTATAG AAATCTTTTA GCAGTTATGT TATCCTATTC TAGTTTCAAA ACGCTATAGA     120
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940

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AGCAGCATTG TGCTAGTCkA GATTCAGTTT ACTATACTAA AACGAGTAGC TTGAAATCAA      180

AAAACCCACC CTCACAGGCA GGTTTTATCT GTATTATTCA GCTAGATTAT GCTTTACCTT      240

CTGAACCGAA TACGTCGATA CGTTCTTCAA CCGATGCTTG GATAGCTTTT ACACCGTCAG      300

CCAAGAATTT ACGTGGGTCG AAGAGTTTTT TCTTGTCGTA TTCTGCTTCG TTTGCTTCGT      360

AGTCACGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTCT GTGTTAACGT      420

TAACTTTGGC AACACCAAGT TTGATAGCTG CTTGGATTTG CTCATCAGGA ATACCTGATC      480

CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTGC AAGTGGTCAA      540

GGTCAAGACC TTCCCAGTTT ACTGGGTAAG GACCGTGGAT GTTACCGATA CCAGCTGCCA      600

AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTCACCTT      660

TACCGATGAT TCCATCTTCT TCACCACCGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC      720

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GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG      960

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ACTCAAGGTT GTTTGTGTTA AATCCACCAA CTGCATAACC GTTGTCACGG GCTGCTTGGA     1080

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GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCAATT CGAACTAAGC CACCTGGAAC     1500

AGAGTGCTTA ATGGCATTGC TGATGAGATT AGAAAGAATC AACTTCATAA CTGATGGGTT     1560

TAGATAAGCC TGCTGATGGG TCAAACTATT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG     1620

CAAGGCATAA TCTTTGACCA GATTTTGCGT CATCTGGAGG AGGTCAATTG TTTCCCTATC     1680

ATCTCGCAAT TCCTGCACAG AAGAGAGGGA AAGTATCTGC AGAACATGGT GATTGAGTTC     1740

ATCCACAATC CCCAAGGCAA CTCCCAGATA CTGGTCTCTA TCCTTATAAC GACCGATATT     1800

CTCTCTCATA TTTTCGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCATGAGA     1860

AGCTCCTCGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGCTT CATTCTTTTC     1920
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941

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ATGCAAGTCC GCAATAACAG TCAAGAGATG CTGGTAGAGG CTATTGATTT GTTCCTTGAG        1980

ATTACCTATC TCATCCTTAG AATCCACGCG CAATCGCACT TGGGAATCCA GGTCCATCAT        2040

CCGACGGGTC ACCCGCTTGA TTTCCAAAAT CGGTGCAACA ATAGTCCGAG CGTAGATGTA        2100

GGCCACCAAA AGGGAAATCA GAAAGGAGGC CAGCAAGGTA TAGGGAAGAA ACTGGAGACT        2160

GATTTGCTCC GCTTCCTTTT GTAAATCCAT GGAAGCTAGA AACTGGAGAA TCATAGTACC        2220

ACCGTCTTGC GTTTTCACCT CGCGCTCCTC AATAAAGAGA GAGGTTGTCT GGCGGTCTGT        2280

GTCCAGAGGA AGACTGTCCT TGACTTCTAA CTTGTCCTCG GTCATCTCAC CTTTGACGGT        2340

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TTTCCCTTCT AGGGACTGGG CAATGGCTGT TGCCTTTTGA CCAATGGTTT CCTGACGATG        2460

ACTCAGATAA GTCGAAGGAA AAAGAAAATA AATAGCTAAA TGAAGGCAGA TAACCAGAAC        2520

ACTAAATATC GAGAAGGTAT AGATAAATAT CTTTGCAAAT AAACCTGTTC GTTTCATTTT        2580

CGCTCCAATT TATAACCAAC ATTGCGCACA GTGAGGATAC AATCCAAGTC TAGCTTTTTC        2640

CGCAATTCCT TGATATAAAC ATCAATAACA CGGTCAAAGG GAACCTCATC TGTCGCTTTC        2700

CAGACGGCAT CGATAATCTG AGATCGAGTC AAGGCCCGGC CTTCATTTTT CACTAGATAG        2760

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GCTGGCCTTT TGTCTGCAAG CAACTGACCA CTAGATAAAA CGTTGTGAAA TTCCTTTCTC        3360

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AAGCAATGAT TTTCACCACT GCTTTCGGAT TTATTTTGAA TTGTTAAATA GCCATTCCTA        3480

TCCACTATTC TTGAATAGAA ACACAAGATG CAATCTTTAT TCTAGACTCA TTTTTTCAAA        3540

TTTATTCACC ATCCAGCAAG AGCTCTTTTG GTTGTTTTCT AAGGAGATTG CTTGAAGCAA        3600

GCGCCATAAC GAGAACCACT AGAACCAAGG CAAGGACAAA AATGATGATA AAGTCTGATG        3660
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942

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TCTGAATGGA AATGTCTAGG CTCGACAAGG TCTTGCTAAA GCCATCTACT TCTGCACCAC    3720

CACCAAGGTT AGAGGCTTGA GCCGCCTTAC TAGCCTGTTT GGCAACACCT GAAGTCACAT    3780

TGGCAAGGAC AGTGTTTCCA ATTGCACGGG CAGTGTAATT AGCTAGGAAG TAAGCAGAAA    3840

CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCCT    3900

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TGAGCAAGAG GGCAAGGAGG AGAACTGAGA AGCTCAAGCT ACCCCAGAAG AGGAGGTTGG    4020

CCATCTTGTA CATACCAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTTGA    4080

CGAGTGTGTA GCTCTTCCAG TTGATACCAC TGATGCCATT CAACTCTTTC ATAACATCAT    4140

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CACGATCAGC AGTGAGATTC TTCTTGGTTT CTGGCGTTTC AATCAGGTCA TATCCAGTCA    4620

AATCTCCGAT AGCGTTGATA CGTTTGACAT AAGACTCAAT GGCCTTGTTT TCGGTGATTT    4680

TTTTGATGTC TTCACCCTTG ATATTCCCAG CACCACGAGG CGTTCCTTGG TTGACGCGAC    4740

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GAAGTGTATT CTTGCTTGCC TTTTTGTTGA CCAATCGGAT ATTTTCCAGC GGAGAAAGAT    5340

AATCTATCAA GTTATAATTT TGAAAGACCA GGGAAATATG GTGCATGCGA TGGTAAGAAT    5400

AGCCCTTCTT ACGAATATCC TCTCCTTGAA AAAGGATAGA ACCTTCAACA GGACTATCTA    5460
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943

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AAAATTTTCC GGGTTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT      5580

TATAACGGTA GGTAACATCT TGTAATTGTA ATAAAGTCAT GATTTCTCCT TCTTAACTAA      5640

TAGATGATAA AATTTCTTTC GGTGATTTTC TAAATAAGAA TAGGAAACAA AGGGCTACAG      5700

ATAAGCAACT AAGCAGAACT AGAAAAACAT AGGATTCTGC AAAAGATAAG ATGCTAGTTG      5760

ATAAACTGCT TGCTTTGGCT AGTGTATCTT GTAAGCTTGC CTGATCTCCA CTTGCTAGTA      5820

GAGTTTGGAG TAGGTAAGTT GTGATTGCGT TTCCTGCAAC AAATGCTGGA AGCAAAGCTC      5880

CAAGAGATAC CAAAACTACC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC      5940

CAAGTGCAAG TAAAATCCCC ACTTCATAGA CCCGTTCTCT CAACCAGAGA GACAAAACCA      6000

GAATTAAGGC TCCAGCTCCT GCTATCAACA TCCCATAAAG GAAGATGGTC AGGAAGGTTT      6060

GGAAAGTTGC AACTGAGTCT TTGATTTGTT CAAAAGCCTT GTTTTCCTTT TCGACTTGGT      6120

AGCCTTGATT TTCCAAGGCC AAGTTTTCTA CCTGCTTCAT GAGTCCGTCC ATTTCCTTAG      6180

GATTTTCTAC ATAGAAGCGT GCTGCACTGA CTTGAGCTTC ACTATTGCCC AAAAGGGTTT      6240

GGCTACTTTC ATAGTCTGTA AAGACTTGAT TTTCACTGAA GTCAGAAGAC AAGCCTGTGA      6300

ATTTCTCTTG TTTTTTACCA GAAAAGATGC CGATAATCTC AAACTCTACT GTTTGTCCTT      6360

TTCCAGATTC AGACTGACCA GCATCCAAGC CAATCTTGTC ATGAAGCGAA AGACCGTTCT      6420

TCTTAGCCAA TTCTTCGTGG ATAAGGATTT TCTTGGAATC CCCTTTTTGA AGGTGTCGCC      6480

CTTCTTTTAG ATTGAAAGCC GAACTGGTAA AGGTTACATC CTTGGATGAA TCCTCAAGAG      6540

CCGTTAAGCT AACCAAGTTA TTGTCTGCAG CTGATAAATC ATCACGCTCC ACGCTCTGCT      6600

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TTTCCAGCCC CTTAATCTTG CTTACAGATG CTAGGTCTGA CAACTTGAAT GTCTGACCAT      6720

TCTCTATCTT CTTAATAGAA AAAGATGTAT TGAGTGATTT ATAAAGATTG CTTTCTACTG      6780

TTTTGTTGGA CTTCATCAGA GTCAAACAGG CTGAAATTCC GGCCAATAAG ACCAATAAAA      6840

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CATACGTGCC GTTCGGCATA CGGCGGTTCA ACTAACTTTT AACGCATGTC GTTCAAGGTA      7080

ATAATCCAAA CACGAAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT      7140

AAGTACCGAC TTCTGAGCTA CTATAGTAGA TTGAAACTAG AATAGTACAC CTCTACTTCT      7200
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944

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CCCTAACTTA AGCAATCCCC ATAATCGTCT CGATTTCTTC TTCCATTGCT TCCAGATAAT      7380

CACTCGTAGG CGAGTACGCA AGCGCTCATC TATGCTAGTG ACTATACTTT TCATATTTAT      7440

AATTCATTCC TTTCGTTTCA CTCAAGGCAC AACACAGAAT GAAAAAGTGT TGTGATCTTT      7500

ATTTTGTTTT ATAATAATAG TGAGAAAACC TATCACTACT ACAAATCACG GGGAGGTGAA      7560

TAAGTGAGTG GTACAGCCAC TACCTCGCAT ATTTTGTCAC ATCATTTAAC GGTACATAAT      7620

AAGTTGTACC ATCTGAATAA GTTGCTACAA TATCATTTGC ATGCTCTCCT TCACCTTTAG      7680

CAAAGGTTGG AGCTCCTGCT GGATGATTTT TATTTGCCTC TTTCAATTTT TCAATAATGG      7740

CATTTTTTCT GTATCTTTTA TATTATCAGG ATTTTTCACT AAGATTTTGT CTGGATATGT      7800

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GATCTTGATC CAAAATCATC TGGTGTAGAC ATTCCTTGAT TGGCTTCAAG TCCACGAGTC      8580

TTTCTCCCAT ACTCCAAAGA TAGAGCTGAG AAAAAGTATG AACACCTTGG TGACCCTGAC      8640

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CGAAAACATA ATCCTGAGCT CCGACCTGTA GCACTGTCTG ACAATTCGGA AAAAGAGTCC      8880

GCATCATATC TAGCCAAGAA GCCAGATTTT CCTGCTGAAA ATAAGAAAGA TGGCAATAAA      8940

CCAACTGAAT CTTTTTAAAA ACTTGCGGTG CCTGTCCCTT GCCCTCAACC AGATAGGAAT      9000
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945

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CACGCTCGCT GAGCCCAGCT TCCTCCAGCA AAATCCACTG CTGAGAAGCT AAAGGGAGCG          9120

TGAGATAGCC CTCTTTCTCT ACTGGTTGGT CTGAAATCCG AGCCTCAGGA AACCAGTCTT          9180

GTAGTTCTTT TGCCCTCATG TTCTAGCCCT CCACTTTTTG GATGCACCAT GAAACCAAAC          9240

TCTCAAGACG TTCCAGATTC TCAGTCATAT GGAGATAGCC CATAACCGCT TCAAATCCCG          9300

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GGTCCCCAAG GACTATCCCA AGAAATCTCA CCTGGTTTGG AAGATTTCCA TAGAGCAAAG         10380

TCTACAGGAT TTTCCTTACG AGCCGTTTCT TCATCGGTAC GACCTGAAGC ACCTAGCTCC         10440

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TAGACATCCC CTTGACTCTC ATAGGCAAAG CCTTTCTCGA TCAAGTCTTC CACAAAACGG         10560

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CCTTCTTCCC TGGCACGGTT GATAATCTTA TCATCCACAT CTGTAAAATT GGAAATATAG         10740
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946

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TTGCCGTCCT CAATCGGGAC AAATTCTCGC AAATCACGAG ACATGGTGTC ATAGATTTTA   10920

ATCATAAATC ATAATCAGGA AAGCTGAAAT CCAAGAACAA TTAGTTTCAT CACTAAAAGT   10980

TCAAGTAAAT TTCAGTCCGA ATATCTCTAC ACTTCGGAAT CGGTTGCTCC TTTCTCATTC   11040

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CTATCCACAA CTTCTCTCGA TTCATGTTCC TCTGAAAATG CCTGAAATTT TAATTGACTA   11400

ATTTGATCCT GATACGAACT ATCTGCTAAC AAAACTTCAA GATGGGAAAC ATTTGCTAAC   11460

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947

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948

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AAAGCACTGT ATTGATGACT TGGACTTCAT TACGGAAACC TTCCGCAAAC ATAGGACGAA     14460

TCGGACGGTC AATCAAACGC GCTGTCAAGG TCGCATCTGT TGAAGGACGT CCTTCACGTT     14520

TCATAAAGCC ACCAGGAAAC TTCCCAGCCG CATACATTTT TTCTTCGTAG TTGACTTGGA     14580

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GGTCATGCTC ATACTTGTCT AAGATGGCTT TAAATTTGCG TGGAAGATGG ATATTCTCAC     15660

AAGTCTTCAA GAGTCGGAGA GCCTGATTTC GATTCAGAAT TGGCATAATT CCTGCATGAA     15720

TGGGAACATC AATCCCAGCC AAGATACACT TGTCCTGAAA ATCATAGAAG CGCTCATTGT     15780

CAAAGAAGAG CTGAGTTACG AGGCTCGAAC AGCCTGCATC CACTTTCTTC TTAAGATTTT     15840

GAATATCTGA AATCTGATTT GGCGAATCTG GATGCCCTTC TGGATAGCAA GCTCCAATAA     15900

TATCAAAGTG AGGGGTTTGT TCCTTGATAA ACTCAATCAA GTCGGTTGCA TAGCGGAAAT     15960

CCTTTTGTGG TTCCACGTCT GGAATAATAT CCCCACGAAG AGCCAAGATT TTCTGCACCC     16020

CAACTTTGTC CAAGTCAGCA ATAGTTTCAG CAACCTTGTC CTTAGTTAGA TAAATAGCTG     16080
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949

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GCAAGTGGGC AATGGTCGGA ATCGCCAAAT CATTTTGGAT AAAGTCAGCC AAACGAACCG    16140

TCGTTTCCTT GATATTAAAT TTATTATTGC TGGCAGTTAC ACTGATAAAA TGGGGAGCCA    16200

ACTCCTGCAT ATCCTGCAAG GCTGAAATAA TGTTATCATT ACCCACGGCT GGGTTTGGAG    16260

GGAACACTTC AAATGAGAGT GACGGTGTTT GGCGTGACAT ATGTAATAAC CTTTTCTAGT    16320

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GTTTAGCACG CAAGTCTTTT GCTGCTGCTA AAAGTTCTTC TTCTGAGATT TCTTTTCTAA     18540

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TCGGACAAAA GAAAAAGACT TGAAGCAAAC GTCTCAAATC CTTTGTAATT CTTACTTTAC     18780

AGCTATATTC CAATTAGAAT ACTAAAACAT GTTATTAGTA ATTCTTATAA GTGACTATGA     18840

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ATCACCATCA TTTCAGGCGA AAATTTTTGG TTATGTTTTT GGTTATGTAT AGTGGAGAAT     19440

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GCCCTTTTCC AAGACATTGT CGGACTGTCC CACGCTTGAT TTCAGTGTGG ATAGTTTGAG     19560

GAGCTTTTCC AAGTAGAGAG GCAATTTCTC TATTTGATTT TCCTTCTTTT TTCCATCGTT     19620
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CTCCGAGCAA CCATTGCAAA TTGAGGTACT CACACAATGA TTAAAACATT TCTCTCTGCC    19860

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GGTTAAGCTC AGCTACATAC GTTTCTGGAA TATCGTAAGC CTTGGCAGTG ACTGGATGCA    21300

CTTGGCCAAG GAAACCAAGA ACTTGGTCAC CGAGTGAAAT CACGGCTGTA CGACCTGGAT    21360
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CTTCGCCAAC GTTAATCTGA CAAACATGGA GGTGAGTCTC TGGCACATCT TCGCAAGACA   23160
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CGATCCCTGT AGTTGACATT TTTTCAGCCA ACTCTTGTGA TGGCACATCA ATGTCCACCA      23280

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CTCTAGTTCT TTTCCTTTCC TATCATTTCA ATAGAAGAAT CCTCTTCTTA CCTTAATTTC      23400

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TTTTCAAAAC CATATCGGTT ATAAAACGCT TGAGCTTTTG TATTATGCTC CCAAACACCT      23520

AGCCAAGCCC AAGAAAAACT ATTTTTTGTA GCAAGTTCAA GTGCGAATTC AAACAGTTGC      23580

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GCAAAGGTTT CACGAAAGGT TTGTTTGGCA ATTTTAGCCA ACACCTCAAC ATCTGCCATT      23880

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CAAAGCCAGA GTATACAGTC GCATCGATAC CACTCATTTC AAGGACACGT GGGTGAACCA      24060

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CACGCAAATC TTGCATCTCT TTTTCATTTC CAGCAGTAAT CTGCTTCAAG CTAGCCAGCG      24900
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ACCCAGCTTT CATATAGAGA GCTTGCAGTC ACGGCTCTCC TCCCTGATAT ACTTCCCTTG    25140

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TTCCTTATAT TTATGATAAA AATCAATACC TATCAATTTT AAGTTATCTT CTGTAGGATT    26700
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955

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CAAGACTTTC AACATACCTC CCCCTAACAT TGCTGGAATG ATTGGAGTCA TGGAACCAGC    28380

GATATACTCA ATGATTCTTT CTAAAATATT CCCTTTGTGC CCTTGAACAA CTGAATCGGA    28440
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956

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AATTTGATAT TGTCCATTCT TTTTCATAAT ACCTATTACA CCTGGTATCT TCTTCACATC    28560

ATCATCATTG ACTAAATTTT CATCTTTTAA TTCTAATCTT AAACGTGTTA CACAATGGGT    28620

AACTCTATTG ACATTTTTTT CACCTCCAAT TACATCGAGG ATTTTTTGTA CCGTATCTTT    28680

ATAACTCATG GTATTCTCCT ATTCTATTAA TCTAAATTTT TTGTTAAGCG ACGAATATGA    28740

GCCATCAAAT AAACTAATTC ACTAGAAGTC AGCAAATAAT TGTACTCCGT TTGTATAAAC    28800

ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATATT TATTTTTCAT TAATGCTAAC    28860

AAGTCTTCAT CATCATCGTC GG                                            28882
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(2) INFORMATION FOR SEQ ID NO: 141:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12835 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

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ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATTATA TTACTTTCTA     240

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TCTTTTTTGA TATTCATGCG CCCGATCTAG CTAAATTCGA TGGACAAGCA ATTAAAAATG     420

ACTTATTAAA ATCAGCATTA GATTTTCGTA TTCTCCAGTT CAATCTAGGT TTTTATCAAT     480

CATTTATTAT TCCAATCATC ATTGTTTTGC TAGGTTTTCA ATATATTGAG CTGAAAAATA     540

AAGTTTTACG ATTGAGTATT GGAAGAGAAG TGAGTTATCA AGGGTTAAAA AGAAAGTTGA     600

CTTTGCAAGT TGCAAGTATC CCTTGTTTGA TATATTTAGT GACTGTGCTG ATAATTGCAA     660

TTATAACCTA TTTCTTTGGG ACTTTTTCTC CTCTTGGATG GAATTCTCTA TTTTCTGATG     720

GAAGTGGTTT ACAAAGACTC CTAGATGGAG AGATAAAAAG CTATTTGTTC TTTACTTGTG     780

TCCTACTAAT CGGTATTTTC ATCAATGCAA TCTATTTTTT ACAAATAGTT GATTATGTGG     840

GGAATGTGAC TCGTTCGGCA ATCACCTATT TGATGTTTCT TTGGCTTGGT TCTATGCTGC     900

TTTATAGTGC CTTGCCTTAC TATATGGTTC CTATGACGAG TTTGATGCAA GCTAGCTATG     960
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957

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GGGATGTAAG TTTGATGAAA CTCTTTACTC CTTATATCCT TTATATTGTC CCTTACATGG      1020

TGCTTGAAAA ATATGAAGAT AATGTTTAAG AATTTTAACA ATATTTTGCT AAATAGAAAG      1080

ATTGTTTTAC TACTTCGTAT AGTTCTGATG ATGATTTTGA TAAACCATCT ATTGTCAACA      1140

GCGGTTCAAA AGCAGGATGC TGTTATCTTT TTCAAGAGAG AATTGATTTC AATTTTTTCC      1200

TATAATGACT ATTCTGAAGC GAATTTAGAA ATCCCCAAAC TATTGTTAAA CCTTTCGCTT      1260

TTCATGGTAG GATGGCTCTC TGTCATTTTA CTTGAAAGTG ATTTGGCAGA CCATTACCAT      1320

CACTTGATTC GCTATCAATC AAGCTCCTTT TTCGATTATA CAAGGAAACG ATTGGTTGTC      1380

ATTTCTAAAT TTTTTACTCA AGATTTGTTT GTCTGGTTTC TTGGTTTACT TCCTCTAGGA      1440

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TTAATTGAAA AAGTCGAGTT TTTATCTCAT TTATCCCTGA GAGAAAATTT GGAACTGTTA      1980

AGGTATTTTT CATCTAAAGT TACGGAAAAA AGAATTGCCT ATTGGATTCA ATACTATGAT      2040

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GCCTTGATTC AAGCCTTTAT TTCCTCTCCT TCTATACTCT TTCTCGATGA ACCTATGAAT      2160

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GATGTATTAG TTGTCGAAAA TGGACATATA CAAATGTAAA GGATATACAA TCCTAGGAGA      2340

TGGCTTATGG CACATCTAAA ATCATTTATT ACACGATATT CCAAGGTTTA TATTGGTTTA      2400

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AGGATTGACA TCTTCATCAT ACAGAAAATC TTGCTAGCTT TTGGAATTCT GTCCATTCTC      2520

ATGGCCTTGC TGTCCAAGAA AGTCAGTCTC TTTGTTTTTG GACTGATTTG CTGTCTTTCT      2580

CTTTGGATTA ACTTATTTAT CACATTTGCC ATTTTGCCGA TTTTTGGCAA TTAAACAGTC      2640

ATAAAAGTCG GAGAGGTTAG CTTGAAAACT AACCTCTTTT TCCTTTTCAA AATGGGGATT      2700
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958

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CTTCCTTGAA AATAATCAGT AATTGTGCTA AAATTAAAGG AACATTCTAA AATATTCGGA      2760

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CTTGAAGGGA ATCTTTGAAC GCTTGAACAT GTCTGAAGAG GCCATTGAGT CTCGCATGTT      4500
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959

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AAGCAGTATA TTGAACAGAT CCGAATTGTC CGCCAGACCT TGATTAACCG TGCTTGGAAT    6240
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960

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ACAGAAGCTC TTGTCAGAGA AATTTACAAA ACGTTAGGAG AATAAGATGG CATTTATTGA        6420

AAAAGGTCAA GAAATCGATA TGGAAGTCAT CAAGGCTGAA ACCCAATTGT CTGCGGAAGC        6480

CTTGAGACTC AAGGAAAGCC GTGACAGGGA ATTGGCAGAT ATTATTTCAG GGAAGATGA         6540

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CGTGTATACT GCTAAGCCTC GTACCAATGG AGACGGCTAT AAAGGATTAG TTCACCAGCC        6720

AGATACTTCT AAGGCTCCAA GCCTGATTAA TGGCTTGCAG GCTGTGCGCC AGTTGCACTA        6780

CCGCGTGATT ACAGAGACTG GTTTGACAAC GGCAGATGAG ATGCTTTATC CGTCAAATCT        6840

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961

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CCAAATGCAG CTGCAGATGC TCAAGTCTGA AAATAGAGTT CAGGGAAGTG GTCTGGTTCT    9660

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962

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GCAACACTTT GAGAGTTTAC AGAACCTTTT TCCCAATTTG AAACTGGCTC TCTTGACAGG    9960

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CACTTTCTAT TTACCCTTCT TTCTTGCATT GATTACATAG ATATGCTACA GTTGTGGTAA    11460

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CCTATAGAGG AAGGGATGAG GTTCCGGAAG ACTTTGATGA TTTCTGGGAT GGGGAAGTGA    11580
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963

AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAAG AGATTTCCAC ATTCCTCAAG   11640

TCAAGTGCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG   11700

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TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAAACCACG TCAGCTTCGC CTTGC   12835

(2) INFORMATION FOR SEQ ID NO: 142:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5020 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGGATATGA AGAACAAAAG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC   60

ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT   120

964

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ACTTTGTATG GTATTGGCTT GTTAGCTCTC ATCGGACTTG CTAGAAATTT TGGAGAGGCT    180

GGTCAAAATC TTGCAAGCTA CTTGCAGACC TTGCATCAGA GCTTGACGGA TAAAACAAGT    240

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GACAAGAAAA GTTGAGAAAA GACCTATTCG AACCTTGGGA TTTTATAGAG AGAATTTCCT    360

CAGCAATCTT CTGAAAGGAT TTAGTCTAGG CCTGGCACTT TTTCTTCTGA CCTTGTTAGG    420

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CTACTGCTGA TTGTCTATCT TGCTAATAAA TTAAAGAAAG AAAATGAAAG GATGTGACTT    960

CGGTCCGTCC TTTTCTTCGT GAAAATACTA TAAGTATGCT AAAATAGGAA TAGCACATGG    1020

AGAGAGGATT CTTATGATCA ATCACATTAC AGATAATCAA TTTAAACTAG TATCAAAATA    1080

TCAACCATCA GGAGATCAAC CCCAAGCTAT CGAGCAGTTG GTGGATAACA TTGAGGGGGG    1140

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ACTCTTGAAT GACTTGGTCG ATATTCAGTT TGAACGTAAT GATATTGATT CCAACGCGG     1620

AAGATTTCGC GTTCGTGGGG ATGTGGTAGA GATTTTCCCA GCTTCCCGAG ATGAACATGC    1680

CTTTCGAGTA GAATTTTTTG GAGACGAAAT TGACCGTATT CGTGAAGTTG AGGCTCTGAC    1740

AGGTCAGGTG TTGGGAGAAG TGGATCATTT AGCGATTTTC CCAGCGACAC ACTTTGTGAC    1800

CAATGACGAC CACATGGAAG TTGCCATTGC AAAGATTCAG GCCGAGTTGG AAGAACAATT    1860

AGCTGTCTTT GAAAAGGAAG GTAAACTGCT TGAAGCCCAG CGTTTGAAAC AGCGGACAGA    1920
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965

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GTATGATATC GAAATGTTGC GTGAGATGGG CTATACCAAT GGGGTTGAAA ATTATTCTCG    1980

CCACATGGAT GGACGGAGCG AAGGAGAGCC TCCTTATACG CTTCTCGACT TCTTCCCAGA    2040

TGATTTCTTG ATTATGATTG ACGAGAGTCA TATGACCATA GGGCAAATCA AGGGCATGTA    2100

CAATGGAGAC CGTTCGCGTA AAGAAATGCT GGTTAATTAT GGTTTCCGTT TGCCGTCTGC    2160

TTTGGACAAT CGTCCTCTCC GTCGGGAGGA GTTTGAGAGT CACGTTCATC AGATTGTTTA    2220

CGTTTCAGCG ACACCTGGTG ACTATGAAAA TGAACAGACC GAGACAGTGA TTGAGCAAAT    2280

CATTCGTCCA ACGGGACTCT TGGATCCAGA GGTGGAAGTC CGTCCGACTA TGGGACAGAT    2340

TGATGACCTC TTGGGTGAAA TCAATGCCCG CGTTGAAAAA AATGAGCGTA CCTTTATCAC    2400

AACTTTGACC AAGAAAATGG CAGAGGATTT GACCGACTAC TTCAAGGAAA TGGGTATCAA    2460

GGTCAAGTAC ATGCACTCGG ATATCAAGAC CTTGGAACGG ACGGAGATTA TCCGTGACCT    2520

GCGCTTGGGT GTCTTTGATG TCTTGGTCGG AATTAACCTG CTCCGTGAAG GAATTGACGT    2580

TCCTGAAGTG AGCCTCGTAG CTATTCTCGA TGCTGACAAG GAAGGTTTCC TTCGCAACGA    2640

ACGTGGACTC ATCCAGACCA TTGGACGTGC TGCACGTAAT AGCGAAGGTC ATGTTATCAT    2700

GTATGCGGAC ACGGTTACCC AGTCTATGCA ACGTGCTATC GATGAAACTG CCCGCCGTCG    2760

CAAAATCCAG ATGGCCTATA ATGAAGAACA TGGTATCGTT CCACAAACCA TCAAGAAAGA    2820

AATCCGTGAC TTGATTGCTG TGACCAAGGC AGTTGCTAAG GAAGAAGACA AGGAAGTCGA    2880

TATCAATAGC CTCAACAAAC AAGAGCGCAA AGAACTAGTC AAAAAGCTTG AGAAACAAAT    2940

GCAAGAAGCA GTTGAAGTGC TTGACTTTGA ACTAGCAGCT CAGATTCGTG ATATGATGCT    3000

GGAAGTCAAG GCCTTGGATT AGGGGAATAG TATGATTTAT TTAAGAAAGT TAAAGAAAGA    3060

AGATTTGATG TCTTTATGGG AAATGGCTTA TTCACAGCTT AATCCAGTTT GGAAACAGTA    3120

TGATGCTCCC TATTATGATG ATTATCAGTA TTTTTCAAAT TTTAAAGAAT TCGAACTACA    3180

AAAATCAGAA TCCATTTTAA GCAACTCAAA TCGCCTTGGT ATTTTTGTTG ATGATAAACT    3240

AGTTGGGACT GTTTCGCGTT ATTGGGTATG TAAAGAAACA AGATGGATGG AATTGGGAAT    3300

TGGTATTTAT GATAAAAAAT TCTGGAACAC TGGTATTGGG AAAGTTGCTA TGTTGCAGTG    3360

GATAGATAGG ACGTTTCAGG ATTACTTGGA GTTGGAGCAT CTGGGTTTGA CAACTTGGTC    3420

AGGAAATATT GGTATGATGA AACTTGCTGA AAAATTAAGA ATGAAAAAAG AAGCTCATAT    3480

TCCAAAAGTT CGTTATTATC AAGGTAAATA TTTTGACAGT ATTAAATATG GTATTTTGAG    3540

AGAAGACTGG GAGAAAATAA ATGACGGTTA TTATCAAATC AATGGAAACT CCTGAAGAGA    3600

TAGAAGGTAA ATCCTTCGTT CACTGGCAAA CGTGGAGAGA GGCTTATGAT GACCTTTTGC    3660
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966

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CTGCGGAATT  TCAGGAGACA  ATGACATTAG  AAAGATCTCG  ACTCTTTAGT  CAAAAGTATC      3720

CAGAAAATAC  ATTGATTGCG  ATGGATGGTG  TGAAGATAGT  TGGTTTTATA  AGTTATGGCA      3780

ACTGTCGTGA  TGAGACTATT  CAAGCTGGTG  AAATTATTGC  TTTATATGTT  TTAAAAGACT      3840

ATTATGGAAA  AGGAATCGCA  CAAAAGTTAG  TGAAAGCAGC  TTTGACTGAT  CTTAATCATT      3900

TTTCTGAAAT  TTTCTTATGG  GTATTGAAAG  ATAACAAGCG  CGCCATTGCT  TTCTATCAAA      3960

AAATGGGTTT  TACTTTTGAT  GGACAAGAAA  AAATACTTGA  ACTTGGAAAG  CCTATAAAGG      4020

AAAAACGGAT  GGTATTCTAT  TCTAAATAAT  TCTCAAAAGT  AAAAGCTAAT  ATGGTACCAA      4080

GTCTGAAAAT  TTAATAAATT  AGAAAGCGAG  TAAATTTATG  TCCCGTTCCC  AATTAACAAT      4140

TTTAACAAAT  ATCTGTCTGA  TTGAAGACCT  CGAAACTCAG  CGCGTGGTGA  TGCAGTATCG      4200

CGCCCCTGAA  AACAATCGCT  GGTCTGGTTA  TGCCTTTCCT  GGAGGTCATG  TAGAAAATGA      4260

TGAGGCTTTT  GCGGAGTCTG  TCATTCGTGA  AATCTACGAA  GAAACAGGGT  TGACTATCCA      4320

AAATCCTCAA  CTTGTCGGCA  TTAAAAATTG  GCCACTAGAT  ACAGGTGGGC  GCTATATTGT      4380

CATTTGTTAT  AAGGCGACTG  AGTTCTCTGG  TACCCTTCAA  TCTTCAGAAG  AGGGAGAAGT      4440

TTCTTGGGTG  CAAAAAGACC  AGATTCCAAA  CTTAAATCTG  GCCTATGATA  TGCTACCATT      4500

GATGGAAATG  ATGGAAGCTC  CCGACAAGTC  AGAGTTTTTC  TACCCTCGCC  GTACAGAAGA      4560

CGATTGGGAA  AAGAAAATCT  TCTAGTCTTT  TACTAAATAA  CCTAGCTGAT  CCAAGGCCTC      4620

CTCGATATAG  TGGAGGTCTT  GTTGTGTCTC  GGCTTCAACT  AGGTGATAAT  GAATACCATC      4680

TGTTAACTCA  GAAATTGGCT  TAAAGTCAGA  ACGTTCAACT  TGTTCTAGAA  AATGTTGCAC      4740

GTCGCGGCGA  CAGGTCAGTT  TTAGTAAGGT  TTCAATCTCT  CCATAAACAG  GATGATCAAT      4800

CAAGATATTT  TGAACGCGAC  CACCATTATC  TACGATAGCA  AGTAATTCTC  GTCCAATTTC      4860

TTCAACTTCA  TGCTTGACCT  TAAATAATTT  GTGATGATAA  GTATTTGCAT  TAGCATCTTT      4920

ATAGATATAA  CCACGATTGG  TAGATAGAAT  TGGAGATCCA  TCAGCTCTTA  AAATTGCAAT      4980

ATCTTGAACA  ATAACTTGTC  GAGTGACATG  AAAGTGCTCA                              5020
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(2) INFORMATION FOR SEQ ID NO: 143:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4965 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

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AAAAAGTGGC  AATCCATTGA  TTGGCCACTT  CATTTAGAGA  ATTATCGTCT  CGCCCTTGAA      60
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967

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GAAGAAGGTC  GTGTAGTACT  TGAGTTACTG  CTATCGCTAG  AACTACTACT  TGAACTGCTG    120

GAGCTGGATG  GAGTTGGTAG  ACTCCCCACA  ATACTAGACC  AAGCATTCTG  ATAATCCGCA    180

TCACTTCCGC  CAATAGCAAA  GCGATAACTT  GTCGCTGGCG  CTCCTGACTT  ATTAGCCCAA    240

TAGCTGGTAA  CAGTCGAACC  TGTGACCTCT  ACTTCTTTTC  CTTCAACAGA  AACCTTCTCT    300

GGTTTTTGAC  CTGTTGATTT  CAAGACTTCC  GATTTCACTA  CACTAGGATC  TAAAGCAAAG    360

CGCTCGTTCC  CCCAAATGCT  TGGGGAAGCT  TGCTGAATCG  CATTTACCAG  ATGAGCCATG    420

TAATTAGAGT  TATTAGAATA  ACCTGCTCTA  CGTGACAATG  AATGATTATC  ATCATGCCCA    480

ATCCAGCCAC  CTAGGGTTAA  TCTAGGTGTC  GAAAGCATGA  GCCACATATT  TTCGTCTTGG    540

TTGGTTGTAC  CAGTCTTCCC  AATCCAATCT  GCATTAGCCA  GAGTAGGATT  TAAAGAAGTC    600

AGGTTAGACT  TGAAGGTTGT  TGTCACACGA  GAGGATAGAA  CTTCTCGTAG  CAATCCCTGC    660

ATAATCGTCG  CAGTAGCTTT  TGAATAGACT  TGAACCGGTT  TATCCTGATA  CTCATACACC    720

ACTCTACCAT  CTGCTGCTTC  AATCTTTGAA  ATCACATGCT  TCTGATGATA  AACTCCATTA    780

TTAGCTAAGG  TCTGATAGCC  ATTGGTATGC  TGGGCAACTG  TGACTTCAAT  ACCACCACCC    840

ATTGGCAAGC  TCTCAATACC  GTACTCAGGA  ATCTCGTAAC  CCATCTTTTC  CATATAACCC    900

TTGACATCAA  CACCCTTTTC  ACGGAGCATA  CGATAGGTCC  AGTAAGCAGG  GATATTCCAT    960

GAATAGTTCA  GAGCTTCTCC  CAAGGTCATC  ATTCCTGTTC  CCTTGCTATT  AGCATACATA   1020

ATCGGATTGC  CATTAGCAAA  GTTTGTTGGA  TAGTTAGATA  GAATCGTTTC  ACTTCCCATC   1080

AAGCCCTGGT  CAATAGCAAT  ACCGTAGGCC  AGCAAGGGCT  TGGTAGTAGA  AGCTGGCGAA   1140

CGTTTGGTAT  CAAAGGCATG  ATTATTTTGA  TTTTCTTGAT  AATTACGACC  ACCTACAAAG   1200

CCTAGAATAG  CACCTGTTTG  GTTATCCATC  AAGACATTCC  CTACTTCTAC  ACGACCTGTT   1260

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CGATAAAACT  TCTGAGTTGC  CTCATTTTTC  AACTCCTTAG  CGGAGACATT  GTCTCTCTGA   1440

GCTAGATAGT  CATACATACG  TTCTTGAGCT  TCTGCCAAAG  TTGTAAAGTA  TAAATAGTCT   1500

CGTGAAATTC  CTGTAACCGT  GCCCGATGGT  AAAAAGTCCT  GTTTAAGGTC  ATAATCCTTG   1560

TACTGAGAAT  ACTCGTCTTT  GCTTAATGCA  CCTGTACGAT  ACATACTGTA  AAGAACTGCC   1620

TTAGCCCGTC  TTAAGCCAAT  TTCTAGGTCT  TCATCACTCT  TCAACTCCCC  AGTATTTTCA   1680

TAAGGAGAGT  AAGTAATGGG  ACTCTGTGGA  AGTCCTGCTA  AAAATGCTGC  TTGAGGAACA   1740

GTCAACTGAC  TGGCATCTAC  ACCGAAAATT  CCCTCAGCTG  CTTGCCGAGC  CCCTGCAATA   1800
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968

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AAGGTCGGCG CATCCCCAAC CACCTGCTGT TTAATTAGTT GCTGGGTCAA GGTTGAACCC    1980

CCACTAGAGG AACCCAAACC TACAAATTTC CCCAAGGTCG CACGAATCAC CGCCTTGGGT    2040

ACTACACCCT TATGTTCTTT AAAGTGTTCA TCTTCTGTCG CAATGATAGC CTTCTTCAGA    2100

TTTTCCGAAA TTTGCTCAGA TGAGATAGAA GTGCGCAACA AATCACTCTC TATGGAAGCA    2160

ATCACCGTCC CGTCCGAATA GGTAATCTCT GAAATAGAAG AGATGTCCTT GACCTGATTC    2220

ACCAATTCTT CTGTCTGAGG CACCCGAACC TTGTCAAATA AGGCCACTCC GTATCCCAAA    2280

GCAATCCCAG CTCCCAACAT TCCTCCTAGA AAACCGAGTA CAAAGAGTAA GTTAAATAAG    2340

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TTGGTACTTG AACCTTTCTT GCCAGGTCTA GCTGATTTTT TATTTTTTTG TTTTTGCTGG    2460

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TTATCTATTA TACCACAAAA GGGAAATTTT CAATAAAATA GCCACTTTCT TCCCTATTCT    2580

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ATGAAGAAGC TTTGCGTAAA GCCCTAGAAG AAGGTCAAGT TTCTTATTAT ACTGGCTACG    2760

ATCCAACTGC TGACAGCCTT CACCTAGGCC ACCTTGTCGC AATCTTGACA AGTCGTCGCT    2820

TGCAACTAGC AGGTCACAAA CCTTATGCGC TCGTTGGCGG TGCTACAGGT CTCATCGGAG    2880

ATCCGTCCTT CAAAGATGCT GAACGTAGTC TCCAAACAAA AGACACAGTA GATGGCTGGG    2940

TCAAGTCTAT CCAAGGACAA CTTTCTCGTT TTCTTGACTT TGAAAATGGC GAAAACAAGG    3000

CTGTCATGGT CAACAACTAC GACTGGTTTG GCAGCATCAG CTTCATTGAC TTCCTCCGTG    3060

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TCGAAACAGG AATTTCTTAC ACTGAGTTCG CTTACCAAAT CATGCAAGGG TATGACTTCT    3180

TCGTCCTTAA CCAAGACCAT AATGTCACTC TTCAAATCGG TGGTTCTGAC CAGTGGGGAA    3240

ATATGACAGC TGGTACCGAA TTGCTTCGTC GTAAGGCGGA CAAGACTGGT CACGTTATCA    3300

CTGTTCCACT AATCACAGAT GCAACTGGTA AGAAATTTGG TAAATCAGAA GGAAATGCCG    3360

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TGGACGCTGA CGCTGTTCGC TTCTTGAAAA TCTTTACTTT CTTGTCACTT GATGAGATTG    3480

AAGATATTCG TAAACAATTT GAAGCAGCGC CACACGAACG CTTGGCTCAA AAAGTCTTGG    3540

CTCGTGAAGT TGTTACACTT GTTCACGGAG AAGAAGCCTA CAAAGAAGCA CTTAACATCA    3600
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969

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CTGAGCAACT CTTTGCAGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC      3660

TTCGTGGTGT GCCCAACTAC CAAGTACAGG CAGACGAAAA CAACAATATC GTGGAACTGC      3720

TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG      3780

CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGACTA TGTCTTGAGT GACGCTGATA      3840

AGTTAGAGAA TGAACTGACT GTTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT      3900

ACTAAACTAT TCAACATTTA TCTATAAACA AAGGAGTTAA CCTCGAGAAA GGTAACTCCT      3960

TTTTGCTGTT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC      4020

GCAAGGTTGT TAGATTATGT AAGATAGAGA GATTTGAAGG ACTGAACCAA TTAAATAAGC      4080

CAAAGCCAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG      4140

TTTGCAAAGA TGATGATAAC GAATCCAACT CTTGGAAGAA ATCCAAACGA TTATCTAACA      4200

ATAAGATATC ACTCATCTGC TTAGAAATAT CTGCACTCTC ATTCATCACC ACACCGATAT      4260

CTGATAGAGT TAAAGCCGCT GAGTCATTCA ATCCATCTCC AACCATCAAA ATAGTGTGAC      4320

CTGCTTTCTG CAGTTTCTCT ACTAACTCAA ATTTCCCATC AGGTTTCAAG TCTGTATAGA      4380

CCTGATCAAA GGGCAAATCT TTGACTAATT CCTCTGTCCT AATCAAGGTG TCTCCTGTTG      4440

CCAGAATCAA TTTTTTCCCC TGTGCCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC      4500

TCAAAGGAGT ATGAATGCAG AACATTCCAA TCAATTCATT TTGATAAGCC AAGAATAAGA      4560

GATTGTAGTG ACTCTTGTAC TCTTCAATTA AAGCATTTTG TTCTGAACTG ATATGAATCT      4620

GCTCATCCTG CATCAAGACA TAATTCCCAA TAAGAACTGG TTGGCCATCT ATATGAGATT      4680

TGATCCCCTT GCTTGCGATA TATTGGAGTT TCCCATGCAT TTCCTCATGT TCAATTCCCT      4740

CTATCTCAGC TTGCTTGACG ATGGCATTAG CAATAGGATG ATAAATGTGT TCCTCAAGAC      4800

AGGCACTGAT TCTGAGAATA TCTTCCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA      4860

CTATAGGATA ACTAGTTGTG ATTGTTCCTG TCTTATCAAA CAAGAAAGTA TCAACTTCCA      4920

GATATTTCTC CCTGTTGTGG CCTCTGGCTG TCATCTCTGT GCTGG                     4965
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(2) INFORMATION FOR SEQ ID NO: 144:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3232 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

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                                        970
CAGGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTCGCT ACTTGCGCCA AAACAAGGAT      60

TCGATAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATTCCCCA     120

AACTGCAATA TGCAAGGTCA GAAAGAATGC CTTTTGATAT AGTGGTAGAT ATTGTTCAAC     180

AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT     240

AAAATCTTCT TTGGATAATA TCTATTTTTT ATTGCCGTTA TAAGGATTTT TATCATAGAC     300

ATAAAATTTC TGAAATTTCC AAACAAATA TTTTAAAAGT TTTGAAAAAG AGTTAAGATA      360

TTTTTGTAAT ACACAAAGTA AACGCTTACT TATTAAGGAG GACATTTTAT GTCATACAAA     420

ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTTGGA GCCAATGGCG     480

CAACAAGTTA TTCCTAAAGC AGCATTTGGC TATATCGCTA GTGGGGCGGG AGATACTTTC     540

ACTTCTTTCC AGTGATTTTA GCGTCAGGTT CTTTTTAGTT TTTAAAGATT ATCCGTGAAT     600

TTCTTGCTTA TTTATGATAA AATGGGAGTG TCGCAAAAAA TGACTCATCG TATTCAATTT     660

TGAGTAAAAC TAGGAGGATC CCATGTCTAC AGAACATATG GAAGAACTAA ATGACCAGCA     720

GATCGTTCGC CGTGAAAAAA TGGCTGCGCT CCGCGAACAA GGAATCGATC CTTTCGGAAA     780

ACGTTTTGAA CGTACTGCAA ATTCACAAGA ATTAAAAGAT AAATATGCCA ACCTCGATAA     840

AGAACAATTA CACGATAAAA ACGAAACAGC TACTATCGCA GGACGCTTGA TAACCAAACG     900

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CGTTCGTAAG GATGCTGTCG GTGAAGAAAA CTACGAAATC TTCAAAAAAG CAGACCTTGG    1020

TGACTTCCTT GGTGTCGAAG GTGAAGTGAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA    1080

GGCAACCCAC ATCACACACT TGTCTAAGGC TCTTCGTCCT CTTCCTGAGA AATTCCATGG    1140

TTTGACAGAC GTTGAAACAA TTTACCGTAA ACGTTACCTT GACTTGATTT CTAATCGTGA    1200

AAGCTTTGAA CGCTTTGTCA CTCGTTCAAA AATCATCTCT GAAATCCGTC GTTACCTTGA    1260

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GACTGAGCTT CACTTAAAAC GCCTTATCGT GGGTGGTATG GAACGTGTCT ATGAAATTGG    1440

CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATAAC CCTGAGTTCA CTTCTATCGA    1500

AGTTTACCAA GCTTATGCAG ACTTCCAAGA CATCATGGAC TTGACTGAAG GCATTATCCA    1560

ACACGCTGCT AAATCAGTCA AAGGTGATGG CCCAGTCAAC TACCAAGGTA CTGAAATCAA    1620

GATTAACGAA CCATTTAAGC GTGTTCATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT    1680

CGATTTCTGG CAAGACATGA CTTTGGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT    1740

TCCAGTTGAG AAACACTACA CTGAGGTTGG TCACATCATC AATGCCTTCT TTGAAGAGTT    1800
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971

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TGTTGAAGAA ACTTTAATCC AACCAACCTT TGTCTATGGA CATCCAGTAG CTGTATCTCC    1860

ACTCGCTAAG AAAAATCCTG AAGACCAACG CTTTACTGAC CGTTTCGAGC TCTTTATCAT    1920

GACTAAGGAG TACGGTAATG CCTTTACTGA GTTGAACGAC CCAATCGACC AACTTAGCCG   ·1980

TTTTGAAGCC CAAGCTAAAG CCAAAGAACT TGGTGATGAT GAAGCGACAG GAATCGACTA    2040

TGACTACATT GAAGCTCTTG AATACGGTAT GCCACCAACA GGTGGTTTGG GAATCGGTAT    2100

CGACCGTCTC TGCATGCTCC TCACTGATAC AACAACTATC CGTGATGTAT TGCTCTTCCC    2160

AACAATGAAA TAAATTCTTA TCCTCTGGGT CTTATCAGAG GATTTTTTGA TTCAAAAAGA    2220

GACTGAATTT AAGGAGAAAA TGAAGTGTAG TATATTGAAA TTGAAATAGT ACACTTTGAT    2280

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GTCACCTCCA GCTAGATGTT TGAGAAAAAG ATAGAGATTG TAGGCGATAC AGCTCATCAT    3060

CATACGAACT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTATCGCCAA AAAATCCCTC    3120

CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACGTCCA CGATAAAGCT GAAACTGGTC    3180

TTGGCTTGTT CCACTCGTCA TATTTGTAAC GAGAGAAATA ACATCGTAGA AC            3232
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(2) INFORMATION FOR SEQ ID NO: 145:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10711 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

972
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

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CCGGAGAAAA TGATGAAAAG TTCAAAACTA TTTGCCCTTG CGGGCGTGAC ATTATTGGCG        60

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ACACAAATAT TACCAGTAAC GTGGTTGATG GTTTGCTAGA AAATGATCGC TACGGGAACT       240

TTGTGCCGTC TATGGCTGAG GATTGGTCTG TATCCAAGGA TGGATTGACT TACACTTATA       300

CTATCCGTAA GGATGCAAAA TGGTATACTT CTGAAGGTGA AGAATACGCG GCAGTCAAAG       360

CTCAAGACTT TGTAACAGGA TTAAAATATG CTGCTGATAA AAAATCAGAT GCTCTTTACC       420

TTGTTCAAGA ATCAATCAAA GGGTTGGATG CCTATGTAAA AGGGGAAATC AAAGATTTCT       480

CACAAGTAGG AATTAAGGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACCAG       540

AAAGCTTCTG GAATTCTAAG ACAACCATGG TGTGCCTTGC GCCAGTTAAT GAAGAGTTTT       600

TGAATTCAAA AGGAGATGAT TTTGCCAAAG CTACGGATCC AAGTAGTCTC TTGTATAACG       660

GTCCTTATTT GTTGAAATCC ATTGTGACCA AATCCTCTGT TGAATTTGCG AAAAAATCCGA      720

ACTACTGGGA TAAGGACAAT GTGCATGTTG ACAAAGTTAA ATTGTCATTC TGGGATGGTC       780

AAGATACCAG CAAACCTGCA GAAAACTTTA AAGATGGTAG CCTTACAGCA GCTCGTCTCT       840

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GACAAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTTGTTCAAG      1140

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TCAAACCTTC TGTAGGAGAA AGTACTAAAA CATATTTAGG GTTTGACTCA GGGGAAGATA      1620

ATGTAGCTGC TAAAAAAGTA GGTCTATATG ACTACGAAAA ATTGGTTACT GAGGCTGGTG      1680

ATGAGACTAC AGATGTTGCT AAACGCTATG ATAAATACGC TGCAGCCCAA GCTTGGTTGA      1740
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973

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CAGATAGTGC TTTGATTATT CCAACTACAT CTCGTACAGG GCGTCCAATC TTGTCTAAGA      1800

TGGTACCATT TACAATACCA TTTGCATTGT CAGGAAATAA AGGTACAAGT GAACCAGTCT      1860

TGTATAAATA CTTGGAACTT CAAGACAAGG CAGTCACTGT AGATGAATAC CAAAAAGCTC      1920

AGGAAAAATG GATGAAAGAA AAAGAAGAGT CTAATAAAAA GGCTCAAGAA GATCTCGCAA      1980

AACATGTGAA ATAACTGTTG CAAAATATAA GAAAGGATTT AGTATTTCCC TTGAATGCTG      2040

AATCCTTTTT TACATTTGTA AAGAAAGATT CTAAAATGTA CGGACCCCCA AAAGTTGGAG      2100

CCTCTTTTTG TCAGAATAGA GAAAATTTTT GTTAATTTTA CTTGTTTCCT ATTGCTTTCT      2160

CAGCTATTAT TTGTTATATT AAAAGTATAA TTATTTTTTA TTTATCAGAG TTAAGCATTG      2220

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AAATTTTCAT TAGGTGTTGC TTCTGTTATG ATTGGAGCTG CATTCTTTGG GACAAGTCCG      2400

GTTCTTGCAG ATAGCGTGCA GTCTGGTTCC ACGGCGAACT TACCAGCTGA TTTAGCTACT      2460

GCTCTTGCAA CAGCAAAGA GAATGATGGG CGTGATTTTG AAGCGCCTAA GGTGGGAGAA      2520

GACCAAGGTT CTCCAGAAGT TACAGATGGA CCTAAGACAG AAGAAGAACT ATTAGCACTT      2580

GAAAAAGAAA AACCGGCTGA AGAAAAACCA AAAGAGGATA AACCTGCAGC TGCTAAACCT      2640

GAAACACCTA AGACGGTAAC CCCTGAATGG CAAACGGTAG CGAATAAAGA GCAACAGGGA      2700

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AATGATAACG CAGGCAAACC AGCCCTGTTT GAAAAGAAGG GCTTGACCGT TGATGCCAAT      2820

GGAAATGCAA CTGTTGATTT AACCTTCAAA GATGATTCTG AAAAGGGCAA ATCACGCTTT      2880

GGTGTCTTTT TGAAATTTAA AGATACCAAG AATAATGTTT TTGTCGGTTA TGACAAGGAT      2940

GGCTGGTTCT GGGAGTATAA ATCTCCAACA ACTAGCACTT GGTATAGAGG TAGTCGTGTT      3000

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CTAAATGCCA GCAATAATGA TGTCAATCTC TTTGACACAG TGACTCTACC AGCTGCGGTC      3120

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CGAACAGTTG TTAGCGTTAA AACGGATAAC CAAGAGGGGG TAAAAACAGA GGATACCCCT      3240

GCTGAAAAAG AAACAGGTCC TGAAGTTGAT GATAGCAAGG TGACTTATGA CACGATTCAG      3300

TCTAAGGTCC TCAAAGCAGT GATTGACCAA GCCTTCCCTC GTGTCAAGGA ATACAGCTTG      3360

AACGGGCATA CTTTGCCAGG ACAGGTGCAA CAGTTCAACC AAGTCTTTAT CAATAACCAC      3420

CGAATCACCC CTGAAGTCAC TTATAAGAAA ATCAATGAGA CAACAGCAGA GTACTTGATG      3480
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974

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GACAATCAAT TGCACTTTGA TGTGACTAAG ATTGTCAACC ACAATCAAGT CACTCCAGGT   3600
CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA   3660
GTCTCTGTTT CTAGTAATCA AACTGGTGCT AAGTTTGATG GGGCAACCAT GTCAAACAAT   3720
ACGCATGTCA GCGGAGATGA TCATATCGAT GTAACCAATC CAATGAAGGA TTTGGCTAAG   3780
GGTTACATGT ATGGATTTGT TTCTACAGAT AAGCTTGCTG CTGGTGTTTG GAGTAACTCT   3840
CAAAACAGCT ATGGTGGTGG TTCGAATGAC TGGACTCGTT TGACAGCTTA TAAAGAAACA   3900
GTCGGAAATG CCAACTATGT AGGAATCCAC AGCTCTGAAT GGCAATGGGA AAAAGCTTAT   3960
AAGGGCATTG TTTTCCCAGA ATACACGAAG GAACTTCCAA GTGCTAAGGT TGTTATCACT   4020
GAAGATGCCA ATGCAGACAA GAACGTTGAT TGGCAAGATG GTGCCATTGC TTATCGTAGC   4080
ATTATGAACA ATCCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG   4140
ATGAACTTTG GTTCTCAAGC ACAAAACCCA TTCCTTATGA CCTTGGATGG TATCAAGAAA   4200
ATCAATCTCC ATACAGATGG TCTTGGGCAA GGTGTTCTCC TTAAAGGATA TGGTAGCGAA   4260
GGCCATGACT CTGGTCACTT GAACTATGCT GATATTGGTA AGCGTATCGG TGGTGTCGAA   4320
GACTTCAAGA CCCTAATTGA GAAGGCTAAG AAATATGGAG CTCATCTAGG TATCCACGTT   4380
AACGCTTCAG AAACTTATCC TGAGTCTAAA TACTTCAATG AAAAAATTCT CCGTAAGAAT   4440
CCAGATGGAA GCTATAGCTA TGGTTGGAAC TGGCTAGATC AAGGTATCAA CATTGATGCT   4500
GCCTATGACC TAGCTCATGG TCGTTTGGCA CGTTGGGAAG ATTTGAAGAA AAAACTTGGT   4560
GACGGTCTCG ACTTTATCTA TGTGGACGTT TGGGGTAATG GTCAATCAGG TGATAACGGT   4620
GCCTGGGCTA CCCACGTTCT TGCTAAAGAA ATTAACAAAC AAGGCTGGCG CTTTGCGATC   4680
GAGTGGGGCC ATGGTGGTGA GTACGACTCT ACCTTCCATC ACTGGGCAGC TGACTTGACC   4740
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CTAGGTGGCT ACAGCATGAA AGACTTTGAA GGCTGGCAGG GAAGAAGTGA CTACAATGGC   4920
TATGTAACCA ACTTATTTGC CCATGACGTC ATGACTAAGT ACTTCCAACA CTTCACTGTA   4980
AGTAAATGGG AAAATGGTAC ACCGGTGACT ATGACCGATA ACGGTAGCAC CTATAAATGG   5040
ACTCCAGAAA TGCGAGTGGA ATTGGTAGAT GCTGACAATA ATAAAGTAGT TGTAACTCGT   5100
AAGTCAAATG ATGTCAATAG TCCACAATAT CGCGAACGTA CAGTAACGCT CAACGGACGT   5160
GTCATCCAAG ATGGTTCAGC TTACTTGACT CCTTGGAACT GGGATGCAAA TGGTAAGAAA   5220
CTTTCTACTG ATAAGGAAAA GATGTACTAC TTCAATACGC AGGCCGGTGC AACAACTTGG   5280
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975

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GGCATGCACA TCTATGACCA AGGATTTAAT AGCGGTACCT TGAAACATTG GACCATTTCA        5520

GGCGATGCTT CTAAGGCAGA AATTGTCAAG TCTCAAGGGG CAAACGATAT GCTTCGTATT        5580

CAAGGAAACA AAGAAAAAGT TAGTCTCACT CAGAAATTAA CTGGCTTGAA ACCAAATACC        5640

AAGTATGCCG TTTATGTTGG TGTAGATAAC CGTAGTAATG CCAAGGCAAG TATCACTGTG        5700

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CGCACTCACT TGTCTGAAAA ACACAATCCA TATACACAAC GTGGTTGGAA TGGTAAGAAA        6120

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AATGGTAACT TGCGAGATGT GAAACTTGTT GTGACAGATG AGTCTGGCAA GGAGCATACC        7020
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976

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TTTACTGCAA CTGATTGGCC AAATAACAAC AAACCAAAAG ATATTGACTT TGGTAAGACA     7080

ATCAAGGCTA AGAAAATTGT CCTTACTGGT ACCAAGACAT ACGGAGATGG TGGAGATAAA     7140

TACCAATCTG CAGCGGAACT TATCTTTACT CGTCCACAGG TAGCAGAAAC ACCTCTTGAC     7200

TTGTCAGGCT ATGAAGCAGC TTTGGTTAAG GCTCAGAAAT TAACAGACAA AGACAATCAA     7260

GAGGAAGTAG CTAGCGTTCA GGCAAGCATG AAATATGCGA CGGATAACCA TCTCTTGACG     7320

GAAAGAATGG TGGAATACTT TGCAGATTAT CTCAACCAAT TAAAAGATTC TGCTACGAAA     7380

CCAGATGCTC CAACTGTAGA GAAACCTGAG TTTAAACTTA GATCTTTAGC TTCCGAGCAA     7440

GGTAAGACGC CAGATTATAA GCAAGAAATA GCTAGACCAG AAACACCTGA ACAAATCTTG     7500

CCAGCAACAG GTGAGAGTCA ATCTGACACA GCCCTCATCC TAGCAAGTGT TAGTCTAGCC     7560

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CCCAGAAAAA TCTGGGTGAT AAATGTTATG GTTGTGCTGG TTGAGGATTC TGATTTTGTT     7800

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TTGTGCTTGG AGTGGTTGAG CTAGACTGTG AAGTTGAACT ATCTGATGAT GAGCTTGAAC     7920

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GATAGGCATT TCGTCCAGTT CCATAAGTCA AGACTGTTTT CATCATGTCG GTCATCATAT     8340

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CACTAAAGAC GACTTTATGG ATATACATTG GTTTATAGTA AGTTCCACCA TTTGCAAAGG     8460

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AAACAGGAGT ATTTGTCCCA GGGTAGTTAT AGGGCTCATC GTGAACGATA GTAGCAGTTG     8760

AATCGTAGAC ACCGTACTCC AAGGCAGGAG CATAGTCTGT GATCGGTTTC ATAGTTGATC     8820
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977

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GGCGTGCTCC TAGCTGGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA    8940

CTTGCAATTC ATCGTCTGGA TAGGCAACGT ATTCGTCTGT ATTGTAAATA TCCCACAGAT    9000

GTTTTTGAGC TTCTTGGTCT ACATTTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT    9060

AGCCTGTTTC TTCTTCAACT TGATTGATGA CTTCCTTGAG GTAATTATCC ATGTAAGCAG    9120

GGTAATTACT TGCTGATTTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT    9180

TCTCATACTG TTCAGCAGAG ATGTAGCCTT GATTTTTCAT TTCAGATAAG ACCAAGTTTC    9240

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CTCCCAGGAT ACGGATGGTA TCAATCCCCC TGTGGTCGAA GAAGCGATGG TCTTCGATAG    9660

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TGCCGGCAAT AAGTAGGTTT CTTGCTGAGA AGAAAAGTGA AGAAGGACAA AGCAGATTCC   10140

TTGTTGGGCA AGGACTTGTT CCATATGCTG AATCTGATGT GGATGAAAAT TTTTCATCGG   10200

AATCGCACGT TTTTGTTTTG TTTCCTTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC   10260

GCCAGAATAG TCCGTCGTTG AAGCTTGTCG AAAATAGGCT TCAACAATCT TGGCACGACT   10320

TCGTTGTGGA TAGTCCACTT GTACGATTTG AATAGGAGTT GGTTTCTTAT GTATAACAGC   10380

CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA   10440

GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT   10500

TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG   10560
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CTAACTCACA TTAATTGCGT TGCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG   10620

CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTTGCGTA TTGGGCGCTC   10680

TTCCGCTTCC TCGCTCACTG ACTCGCTGCG C   10711

(2) INFORMATION FOR SEQ ID NO: 146:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 11887 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

TACATTCATT CCATCGGCTA CTCCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA   60

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TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAATGAAGA ATCATTAGAC   180

TCTGGACCTT TTTCTAGTGT CTCACTTACC TCATATTCTT CACCCTTACT AGAAATAACA   240

CTCAAAGCAG ATACTGTCGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA   300

CCCAATTTTT TATAAACAGT TTTCTTCATT ATTGTATCCT CCTAATGTAA TTATAGCGTA   360

CTATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTTAAATACC   420

CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCACGCT   480

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GAGTATTGGT CTTCTCTTTT CTTAACAACT GGTGGTCAAT AGCGACACGT CTCAGCCAGA   720

TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAAATCA AAGAGCAAAC TAGGAAGCTA   780

GCCGCAGTTG CTCAAAACAC TGTTTTGAGG TTGCAGATAG AGCTGACGTG GTTTGAAGAG   840

ATTTTCGAAG AGTATTAAGA TTATTTCTTC TAGTTCAGGG TGTTCATACA CCAAACTCCC   900

TACTACTCGA TCTAGGATAT CTACCGTGTC CCACAAGGAT TTTGTCACGA CTAACTGCTC   960

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CACATATTGG TATTTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCAAAAT CCCAATCGAT   1080

AATCTTTGTT TTTTTCGCTT CTGGAAAATA TTTTATAGAG TTTATTTCTT TCAGGCACCG   1140

CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTTTAG   1200

AGTCTTTTGC TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCCTCTT   1260

979

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GCCCCACCAA ATGGTGCTGA AAGGCATAGA CAGCCGCCTG GGTACGATCG CTGACTTCAA      1320

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CTGCGATGCG CTGATTTTCG TAGCCCTTGG CGATGAGTTG GAGAACATCT CGCTCACGCG      1440

CAGTCAATTC TTCATGAAGT TCCATATGAT TGCGGTGGTA TTCAACCTTC TTGCTAACCT      1500

CTTGCTCAAT GGCCAGCTCG CCAGCAGCTA CCTTACTGAC GGCATGAAGC AATTCATCTG      1560

CACTAGAAGT CTTGAGCATA TAGCCTTTGG CACCAGCATC TAAGACTGGC ATGATTTTTT      1620

CATTGTCCAA ATAAGAGGTC ACAATCAAAA TCTTGGCTTC AGGCCATTCT TTAAGGATTG      1680

CTAAGGTCGC GTCAATCCCA TTCATCTCAG GCATGACAAT ATCCATGACA ATGACATCTG      1740

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TCAACCCGCT CCTTGATATT TCGCAGTCCA TAACTCAAGT CGTCTAAGCT CCCTAACTGG      2040

AAACCAATCC CATTGTCCAC CACCTTCAGT TGCAATTCAA CATCTGTCTG ATAGAGGTAG      2100

ACATCTAGGC AAGATGCCTG GGCATGGCGG AGGGTATTGC TAATCAACTC TTGCAGGATA      2160

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CTGTGGGAGA AAAAAAAGAC AAATAGGAAG GAGGTGAGAG CAATAATGAC ATAGGCTTGT      2880

TTTTTCATCC TCTAACCACC TCCACATCAC CAATCATAGT GGTCAAGAAA ATCTTGACAC      2940

TCTTGTTACT CTTGAGATAG TCTTTTGTTT CTTGATGATA GTGTTCATTG CGGAGGGCTC      3000
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980

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GCTTGGGCTG GTTGAAAAAA ATCAAATCCC CATAGAGACA GTTAACGCTG AGACTGACTT    3060
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TGTCATGATT GGTTAAGATG ACCCTCTCCA GATGAATAGT GTCCTTGCCC ATGAAGCGAA    3180
AGAGATTGAT ATCATCGAAT TGGCAAGTCT GGTAGCTTGA AAAATGATGA AGATTTCCAA    3240
ACCAACGATT TTTCTCCTTC TTAACCGTCA CGACCTCTTC AAAAACCAAA TTGGTCTGCT    3300
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CTAAAAGAAG ATTATTTCCC TCTTTACCAG TGTAGTAGCG AATCAAAAGC AAAAAGAGGA    3480
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GAAGACAGGC TTCGATAAAT AAAAAGATTT TAAATTTTCT CATAGGTTCA TCCTCTCCCT    3600
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ACGGTTCGTG ACAATCCCAC AGCCTTAGCA CCAAAAACCA AGCACTTAAT CATATCCAGC    3900
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TTCTTGATAT AAGAGCTCAA TCCCCAGATC GGCCCAACGA TTTTTTAAGG TTTTGGTTGA    4740
TTGCGCATCA AAACTCAGGG CGATGCCACA GTCACCACCA CCAGCACCAC TACTCTTGGC    4800
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981

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AACGGTCTGC AAATCTTGAC TGGCTTCTTT CAACTGTCTA AGCAAAGGCG TGTAAATATC        4860

TGTACTCAAG CCTTCTAAAA GCTTGCTGGC TACTTCTACT TGATCGATAA TCTTTTCTGA        4920

TTTCCCCTGT TCCAAGGCTT CTACCAGAGA AGTCACCGTT TCTTTTGAGG AAGTTAAAAA        4980

ATTTTGATTG ATATTTTGCT TGATTTGCTG GACCATGTGA CTCGATACAG CCACTTCCTT        5040

GGTCCATCCC ACTAAGAAAT CACATTCTAA AGTTGGTTTC ACTTGTGAAA TTGAAAAGCC        5100

CCAATCACGC TCCAGAACTG TCGCCAAGTT TTCTTCTTCT AACCAAGCAG CCACCTTCTG        5160

GCGATCAAAT GACTGGTAGA GAACCAAATC CTCTGCCACA ATACAGGCAA GGTCGCCCAT        5220

GGAACCATTG TCTCCTCGCT TAAGCAAGAC AGCGCTAGTC AGCTTGAACA AGAGCTCCTG        5280

ATCAACAGAA ACATCATACA GAGCCAGTAA AGCCTTGACA ACCAAGACAA CGACGCTGCC        5340

ACTAGAACCT AGACCAAACT TTTTCCCTTC TCGTTCCATT TTGCCACAGA TTTCTAGAGA        5400

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AACCTGAGGC AAATTTGGCT TCCTGTGCCA ACTGACTTCT ATCCAATCCA AGCTTGAAAT        6240

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AAAATTCGTC AGCTGTTACA TTGGCTGGTA AAGGCGACAA GGTCGTCTCT GTATACATAT        6480

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982

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ACCATGGCTA AGAGTCGTTT CAACCAAAAA GTCTGCCTCA GGGCTACTGA CTCCAATTTC     6780

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ATACTCCAGT GAGGCATAAA CCGCCATGGA CAAGGTATCC TCCTCATAAA GGCGCCAAGG     7320

ACTCTCTGCA GGAACTACCT TACAGGTCAC CTCCACCTCC AAAAGAGGCA GGGAAATGGC     7380

AGGATAACCG TAAACGACCG CATGTTCCCC TATTAAAATT ATCTTACTAT GTGCCTGACC     7440

GACACCAACT TTTTTGTCA TTTTTTCCTT TTACTAGACG AAAAAACGTC TTATTTTTCA     7500

TACAAGTATT AATTCTTTCC TATCTATTTT ATTATATTTT CACAAAAAAA GCGATTGTTT     7560

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TAATATTTGA TAAGTTATCC TAAAAGTATT ATTATGTTGT TGTGTTATAG ATTGATTGAA     8220

TCTAACTAAA GGATCCTATT CAATTACTAG AACTATCACA TACTCAAGGT CAGCTCACAG     8280

ATGAGCAACT ATTTTGGTTA CAATGTCTAC TAAATTTAAG TCAAACAAAT AATTTAGTCA     8340
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983

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AATTTTTACT AGATAAAACT GTAAATTCTG AAGGAAGGAT CACTTCTTCA ACAGAATTTG    8460

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984

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TGTTTCTGAC GACCAGTATG ATTGCCATCT TGGATGTGTC CCCTCGGCTG ATTGCCCTCC   10200

GCTTCATCCA ACAGACACTA GCACAACTGA GCATTGGGCA ACTCCTCGCC CTGCTCTCCA   10260

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TCCGTTTCAC GCACCTCTTG GTTTTCTGTG AGATTTCCCT ATTGACTCTA ATAACTAGTA   10380

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CCAACACTGT CTTTAGTTTT AATCTCTAAT GTTTTCCAAC CAACAAACTC TTGTAGCACT   11460

CCATTTTTAT CGAAGTAGTA CCACTCTGAC TTTGGAAAAC CTTCTAATCT GATACCATTT   11520

GGGTAAGGAC CAATTGTACT ACCTTTAGAT GGAAACGGGA TATATTGCCA GCCGACAACC   11580

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TCTTTGAGGT CCCCCTTTTT GTAGTAGGTT CTTCCGTTTT CTTGGACAAA CTGCCATCCT   11700

TCAGAATCAT CTGCAAATAC TGTACTGGTC CCTAGCAAAC CAAAGAAAAA TACTGTCAGT   11760

CCAACTTGCA TAGTTTTTTT CAAAATTTTC ATCTATATAC CCTCCAATAT TAAATCCACT   11820

CACCAGATGA GGCGAAATTA TAAACTTTAC CATCGATAGT TTGGCTACCT GTAACCATTG   11880
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985

CTCCAGG 11887

(2) INFORMATION FOR SEQ ID NO: 147:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 11340 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

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CCGGTATGTT CTGGAATACT ACCAATCTAA GCTGGCTGTG CCCTACAGTT TTACAACCCT      60
GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTTGGAGT CTGGTATTTC     120
AAACGCTGAT AAAATATCCG ATATTCCTTT ATCAGTTTTG GAAAATATGT CTAAGAAAGA     180
CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA     240
ACAAGGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACTTTCTA GTCTTTACAA     300
GTATCTAACC GAGGAGGTTG AAAACGATCA GGGGGAACCT TATTTCTATC GTAATGTAAT     360
GAAAAAAGTT TCCACCAAGA AAAAGAAAGA AACCCTTGCT GCCAGAGCTG AAAATATCAA     420
GCAAAAACTC TTTCTAGGTG ATGAAACAGA AGGTTTTCTA ACTTATATCG ATCAAGAGCA     480
CCCACAACAG CTTTCAAATC GAGCTCTCTC ATCATTCAAC AAAAATAAAG AACGAGATTT     540
AGCCATTATT GCCCTTCTCT TGGCATCTGG TGTTCGCTTA TCTGAAGCTG TTAATCTAGA     600
TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAAACG     660
TGACTCAGTC AATGTCGCTG CTTTTGCTAA ACCTTATTTA GAGAATTATC TGGCCATTCG     720
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TGTTCCTAAT CGTATCGATG CTTCTAGCGT TGAGAAAATG GTTGCTAAAT ACTCAGAGGA     840
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TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC     960
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TTACGTATTT TAAATTATGT AAATAAATAT CAAAAAAAGA AGTTGGCCAA CTTCTTTTTG    1080
ATTTATCCAA CTACCGCTTC AGCGATTTCT TCACGGCTAA TACCAGCGAA GTAGCGTGTG    1140
ATATCAATGG TTTTTAGCGC CTTAAGAACA TCTTCGCGTT CGTATTTCAC CCCACGAAGG    1200
ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAAGAAGT CACCATAAAT CTTGATGTCT    1260
TGGATTTTTG ATTCAGTAAC GTTAGCAAAG ACTTCAACCT TACCACTAGT GAATTTGATT    1320
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986

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GTATCCTTGA TGCGATTGAT TTCGGCCAAT TCTTCTTCTG AAAAGACGTA TTCAGTCATC    1440

TCTGGGTACT CTTTTTTCAT GTATTCCAAG AGTAAATCAC GGAATTTTTC GACTGTGATT    1500

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GCCATTCCTA GAACATCTGC AAACGCTTCG TACATCACTT CAGAGTAAGT TGGGTGCCCG    2220

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ATACCAGGGA CGTTGATCTT GTTGACTTTT GAACCACCAG CAAGAATGAT TTTCTTGGTT    3120
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987

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TCAAGCAATT CAGAACCATT TACCAAGACG TTCTTGTCTT TAGTGATTGT ACCAATTCCT      3180

TTATGAACAG TAACTCCGTA GCTACGAAGA AGTCCTGCAA CACCACCAAC AAGAGTATTA      3240

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988

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AGGTTTATCC CTAAATCATC CGCTAACTTT CTAGCTGCAG GAGTCGCTCT TAGCTTGTCA    4920

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GCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT    5100

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ATCGATGACA TTGTTACCGT CTTCGATGAA CATTCCAGGA ATTCCATAAG CGGCGCTACG    6540

TTGATGGATA TGTTCTATAT TGGTCATTTT CTTGATATCC GCAGAGATAC CGTAACCGTT    6600

GTTAATGCAA TAGAAAATGA CTGGCAGGTT CCAGATAGAA GCCATGTTCA CTGCTTCGTG    6660
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989

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GAAAACACCT TCATTGGTCG CACCATCTCC AAAGAAGCAG ACAACGATTT TACCGGTATT    6720

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ATTGGCACCA AGGTTCCCAG CATCAAGGTC AGCGATATGC ATAGATCCAC CTTTCCCTTT    6840

ACAGGTTCCA GTGTATTTAC CAAGGATTTC AGCCATCATT CCGTTGAGGT CAATCCCTTT    6900

AGCAATAGCT TGCCCGTGTC CACGGTGGTT TGAGGTAATC AGATCATCTG GATTGAGAGC    6960

TAACATAGCC CCCACGTTAG CTGCCTCTTC ACCAACAGAA AAGTGCGTCA TTCCTGGCAC    7020

TTTCCCTTTC TTTACTAATT GTGCAATTTT TAAGTCCATG CGACGGATTT CTTCCATCTT    7080

ACGGAACATT TCTAGCAAAA GATTTTTATC TAAAGTTGAC ATCTTCTTGC CTTTCTAACT    7140

TTCTTCTTAC CTTACTATTT TACCGCTTTT GGCAAATACT GTCAAAGTTT TTCTAAAAGA    7200

AATTTCACAA AATAAAAAAG AAAACCCCGT GAAAACAAGG GATTTTCTTG TCAAGAATAT    7260

TTTTTCACAA ACTTTTTAGC ATTTGGATTT TGCTAAAGAT TCAAATCTCT TCATAATCAC    7320

AGTTAAACGC CAACGGTAGA GCGCCCCGCT CACAATCAAA CTAATAATCA AGCCGATCCA    7380

GTAAGAATAA GCTCCAAAAT CTGTTAGGGA ATCAAATAGC GTAnCACAGG GATTGCTACG    7440

CCCCAATAAC CAAGCAAACC AAGGTAAAAA GGAATAACTG TATCCTTATA CCCCCGCAAA    7500

ATTCCCTGAA GCGGCGCCGC AAAGGTATCT GCTAACTGGA AGAAAAGACT ATAAGTTAAA    7560

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CTAAAAATGT AAAGGAAGGT TAAGGTGAAG GCCGCAAAAA TGAGGGCAGT CCATCTTCCT    7680

AGACCAATAT AGGTTTTCGC ATCATCAAAT CGCTTGGCTC CCACTTCATA GGAAACGACA    7740

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GCTGACTGGT GACTAGCTAT AATCAAGGGC GAAAACTTAG CCATAATCAA GCCAACCACT    7860

GAAAAGATAG CCACTTCCGC GAAGACAGTT CCCCCAATAG GCAGACCTAA ACGAACTCCT    7920

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CCTAAACCAG CACCAGCCCC TCCCAGTTCT GGAACACCAA AGGCACCGTA AATCAAGAGA    8100

TAGTTAAATC CGCTATTGAG AGGGAGTAAC AAAAGCATGA GGTACATGGA CAGTTTGGTC    8160

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ATAGATAAAA ACCAAAGATA GCGAACCGCT ACTGCCGCTA CTGCTGCTTC TAACCCAATA    8280

TGATTCAAGA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAC AGATAGGCCC    8340

AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCCTTTTT GCCTCGACCA    8400
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990

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AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAATCC CTGTTAGAAA TGTAAAGAAA    8460

GGATTCCAGA TACTGGTTGC CATAGATACA CCAGCCAAGT CCATAGTGTT GTATTGACCT    8520

GTCATTGCAG TATCAACAAA AGAGGCAGAA TAATTGGCAA ATTGGTAGAT CAGGATTGGG    8580

AAGAAAATTT TTAAAAATAA TACTAACTTC TCTCGTAAAC ACTTTGTCTT ATACATACTT    8640

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TGACACCTGA TTTGAGACCT TCGATAACGG CACGACGGTC TGATTCCAAA CGAAGCGGTG    9360

GATTCATCTT AGCATTGCTA CCTTGTGTTA AAAGAAGTGC TTCTGTCTTA GAGAAATGCT    9420

GTGGCGCTAC TTCTGCTGTG ACTTCTGCAC CTAACCCCTG AGCAAACTCC ACTACTTTAA    9480

CACTTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGTTGCA TAGGCAATCA    9540

TGACATCACG CGCCATCATA GCGTACTCAG CCACCCCAGT AGCACCGCAG ATATGGAAAT    9600

GTTCTCTAGC AATATTTTCA TTAAAGCCAA GAACACCGTT CAAACCTGGA TCTTCCTCAT    9660

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TGCTCTCAAG CGGAATACCG TCATCAGAGA AACCAACCGC ACCAGCTTCT AAGAGTGCCT    9780

TAAAGTCAGT CAAGTTTTTA CCATTAAAGT TTTTAGTAAT GGTCGCAACT GTCTTGACAT    9840

TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCACG TCTGAAATGG    9900

TTGGACTGGT ATTAGCCATC ATGACGACAG TAGTAAAACC ACCTGCAGCG GCTGCTAGGG    9960

CACCAGTATG AATGTCTTCT TTATGTGTTT GACCAGGTTC ACGGAAATGA ACATGAATAT   10020

CGACCAAGCC AGGAGCAACC ACAAGACCAG TAGCATCAAT CGTTTCTGCT CCTTCTTCCG   10080

TGATCTCAGA CGCAATTTTG ATAATTTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT   10140

CCAAACCAGA CTTGGGATCC ATTACACGAC CATTTTTGAT TAGTAGCATC TGCTTTCTCC   10200
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991

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TTTATTCATA GAAATCAACT TGGGTATCCA ACAATTTATC CCCATCATAA ACAAACTTGG    10260

CTGAAAAGAA GGGTTTATCC TCTAAAAGCC ACTCAACAAA GGTGTGGTCA CCTTCCCAAG    10320

TCGGCTTGCT CAAAACCTCA TCATAGGGAA CCCATTCTAG CGTCCCCTCA TTGCAGTCAA    10380

TCAAGTCGCC CTCAAACTCC GTCACCTTAA AAACATAGGT GTACCAGTCT AAATCTGGTG    10440

TAAATTCAGG AAAAGTGATG ACACCTTTTA GAACTGGCTT GGCTTTGAGC CCTGTTTCTT    10500

CAAGGATTTC ACGCGCCGCG CATTCCTGGG GCGTCTCTCC TCTCTCTAGC TTACCACCCA    10560

CACCAATCCA TTTCCCTTCA TGGACATCAT TGGGTTTCTT ATTACGATGG AGCATGAGCA    10620

GTTCTTTCCC ATTATCAATG TAGCAAATCG TCGCTAACTG AGGCATATTT TCTCCTTATC    10680

TAAGCCAATC GATTGGCTCT TGTCCTGTCT CTTTTAAGAA TGCATTGGCC TTGGAAAAGG    10740

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TCAAGTGATG AGGATTGGTA ACTAATGCCT TCTTCTTACG TGCATAAGCT CCCCAGAGTA    10860

CAAAAACGAC TGGTCTATCT AGATGATTGA CCACCTGAAT CACAGCATCA GTAAAAGGCT    10920

CCCAGATTTG ACCAGCATGA CCATTGGCCT GTCCAGCAGG AACAGTCAAA CAAGCATTAA    10980

GAAGCAAGAC TCCTTGCTCA GCCCAAGCTG TCAAATCATG AGATTTCTTA ACTCCGATAT    11040

CATCTGACAA TTCTTTCAAG ATATTTTGCA AGGATGGTGG AGCTGGGATA GAGTCAGGTA    11100

CAGAAAAACT CAAGCCCTGC GCTTGACCTG GTCCGTGATA GGGGTCTTGC CCTAGAATTA    11160

CCACCTTAAC TTCTTCAAGC AGTGTTGTCA AGAGAGCCTG AAAAACCTTT TCCTTGGGTG    11220

GATAAATAAT CCCCTGAGAA TAGACCTGCT CCATAAACTG ATTGATTTTC CCGAAATAAC    11280

CCTCAGGTAA TTGCGCCTTA ATCAAAGCAT GCCAAGACGA GTGTTCCATA GCCGACTCGG    11340
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(2) INFORMATION FOR SEQ ID NO: 148:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 12127 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

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AAAAAATAGA CTTGTTAGAC TATAAATGTA GTAAGCCTAC ACAAGAAAAA TACATAGAGA    60

TAAAGGTGAT TATTATGAAA TTCAAAAAAA TGCTTACTCT TGCAGCCATT GGCTTATCAG    120

GATTTGGGCT TGTTGCCTGT GGCAATCAGT CAGCTGCTTC CAAACAGTCA GCTTCAGGAA    180

CGATTGAGGT GATTTCACGA GAAAATGGCT CTGGGACACG GGGTGCCTTC ACAGAAATCA    240
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992

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CAGGGATTCT CAAAAAAGAC GGTGATAAAA AAATTGACAA CACTGCCAAA ACAGCTGTGA      300

TTCAAAATAG TACAGAAGGT GTTCTCTCAG CAGTTCAAGG GAATGCTAAT GCTATCGGCT      360

ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG      420

CTAGTCGAGA CACAGTTTTA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATTGTTT      480

GGTCTTCTAA TCTTTCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG      540

GTCAACAAGT GGTCACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA      600

CAAGCCAACA CTTATCAGGC AAGTTGTCTG TTGTAGGTTC CACTTCAGTA TCTTCTTTAA      660

TGGAAAAATT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT      720

CTAATGGGTC TTCAGCAGGT ATTACCGCTG TTAAGGAGAA AACCGCTGAT ATTGGTATGG      780

TTTCTAGGGA ATTAACTCCT GAAGAAGGTA AGAGTCTCAC CCATGATGCT ATTGCTTTAG      840

ACGGTATTGC TGTTGTGGTC AATAATGACA ATAAGGCAAG CCAAGTCAGT ATGGCTGAAC      900

TTGCAGACGT TTTTAGTGGC AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT      960

CCATAAATCT CTAAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA     1020

GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAAACAAG     1080

CCTTCAAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTGTTGTAG     1140

CTATTTTGCT AATCTGTTTC TTTATTTTTA GTAATGGCTT ACCTTTCATA GCTAACTACG     1200

GCTTTGCCCG TTTTTTATTA GGCAGTGATT GGTCGCCAAC GAACATTCCG GCAAGCTATG     1260

GTATTTTACC AATGATCGTT GGTTCCTTAT TAATTACCTT AGGAGCGATT GTGATTGGGG     1320

TGCCAACAGG CATCTTGACA TCGGTGTTTA TGGTTTATTA TTGTCCAAAG CCCGTCTATG     1380

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ACCAGCCGAT TATTCCAAGT GGACTCTTTT CAGGAACCAG AACCTTAACA ACCAATATTG     1800

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TTCTCTTTTT CCTTATTCTC TTGATTAATG CCTACTTTGC CTACTTGAAA GGAAAATCAT     1920

CTTATGAGTA AATACCTGCT AAAACTTCTC GTTTATTGTT TTTCAGCTTT AACCTTTGGC     1980

TCTCTCTTTT TAATCATTGG TTTTATCCTC ATCAAAGGCT TACCTCATCT AAGTCTATCC     2040
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993

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CTCTTTTCTT GGACTTATAC TTCTGAGAAC ATTTCCCTTA TGCCAGCGAT TATTTCCACC        2100

GTTATTCTGG TCTTTGGTGC TCTTCTTTTA GCCTTGCCCA TAGGGATTTT TGCTGGTTTT        2160

TATCTTGTGG AATATACAAA AAAAGATTCC CTTTGTGTTA AAATCATGCG ATTGGCCTCA        2220

GATACCTTAT CTGGGATTCC TTCCATTGTT TTTGGTCTGT TTGGCATGCT CTTCTTTGTA        2280

GTCTTCTTAG GTTTTCAATA CTCTCTGTTA TCAGGAATCT TAACCTCAGT TATCATGGTG        2340

TTGCCAGTCA TTATTCGCTC AACAGAAGAA GCCCTTTTAT CTGTTAGTGA TAGCATGCGT        2400

CAAGCAAGTT ATGGACTTGG GGCAGGTAAG TTACGGACTG TTTTTAGAAT TGTTCTACCA        2460

GTTGCCATGC CAGGTATTTT AGCTGGAGTG ATACTAGCTA TTGGCCGTAT CGTTGGTGAA        2520

ACAGCTGCCC TCATGTATAC ATTAGGTACC TCTACCAATA CGCCAAGTAG TCTCATGTCT        2580

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GAAGCCTATG CTACCGGCGT GATTTTGATT ATTACTGTTT TAATGATAAA TACTCTATCA        2700

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CCCAAGGACA CATGGTATTC GAGACAAAAA ACAATTAGAT GCCTTAGTGG AGAAATCTTT        3120

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CTGGCCTTAG CCTCCAAAGA CAAGGAGATG GCAGAGCTAA TTATCAATAA GGATCATGCT        3660

ATCAACCAAG GTCAAAGCGC TATCGAATTG ACCTGTGCCC GTTTGTTGGC CTTGCAGCAG        3720

CCACAAGTGT CTGACCTTCG ATTTGTGATT AGCATCATGT CTTCTTGTTC AGACCTTGAA        3780
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994

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CGTATGGGAG ACCATATGGC AGGCATTGCC AAAGCTGTTT TGCAACTAAA AGAAAATCAA      3840

CTAGCCCCTG ACGAAGAACA GTTACACCAA ATGGGTAAAT TATCCCTCAG CATGCTAGCC      3900

GATTTATTGG TTGCCTTTCC TTTGCACCAA GCCTCAAAAG CTATTAGTAT TGCTCAAAAA      3960

GATGAACAGA TTGACCAATA TTATTATGCC TTATCAAAGG AAATCATTGG ACTTATGAAA      4020

GACCAAGAAA CCTCAATTCC CAATGGAACT CAATACCTTT ATATCATAGG GCATCTGGAA      4080

CGCTCGCTGA TTACATTGCT AACATTTGTG AACGCCTAGT CTACCTAGAA ACAGGAGAAC      4140

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GCCTTATTTG ATACAATCTG CCAGATAAAT CTGATACTCC CTGTTCCATA TAGAGCTAGA      4620

GGGCAGGGGA AAACATGCCT AACAGAATAA GTCACCTTAT TTTAAAAATC GAGCATCAAA      4680

CCAAGGGAGG AGTCTGCCCT TTTTTAGGAA AAAATCAAGA CAAATCTCCT CAATTATGTC      4740

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AACCGCCCTT TCACAAGTCT TAAATGACAA TGGACACGAG GTACGTATTT GGGGAAATCT      5520

TCCCGAGCAA ATCAATGAAA TTAATACACA CCATACTAAT AAGCACTACT TTAAAGATGT      5580
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995

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CGTTCTAGAC  GAAAATATCA  TTGCCTACAC  CGACTTAGCA  GAAACATTGA  AAGATGTGGA      5640

TGCGATTTTG  TTTGTTGTCC  CAACAAAAGT  GACACGACTT  GTTGCCCAGC  AAGTTGCACA      5700

AACCTTGGAC  CATAAGGTTA  TCATCATGCA  CGCATCAAAG  GGATTAGAAC  CTGATAGCCA      5760

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AGCCATCATC  GCTCGAGGTT  TAGCAGAAAT  CACCCGCCTA  GGGGTAGCAC  TCGGGGCCAG      6120

TCCATTGACC  TATAGCGGCT  TATCTGGTGT  GGGAGATTTG  ATCGTAACGG  GAACTTCCAT      6180

CCACTCTCGT  AACTGGAGAG  CTGGAGATGC  TCTCGGACGA  GGAGAATCCC  TAGCTGATAT      6240

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TGCTCGTGAG  TTCAAAGGGG  CTCGTTACGA  TGTCGGAGAC  AAGTTTGGCT  TCATGAAAAC      7260

ATCCATCGAC  TACGCCCTCA  AACACCCACA  AGTCAAAGAT  GATTTGAAGA  ATTACCTCAT      7320
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996

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CCAACTTGGA AAAGAATTGA CTGAGAAGGA ATAACAAAAT CATTTATATA AAGATTAGCC       7380

ACACATAAAT TAAGTAAATT CTCTACTTGA ATCTACCTAT TTAATAAAAA CTAATGAAAA       7440

CGCTATACTT GTATTTGTTT TTTCATTAAA ATAAGAGTAG AATAAATTAG TATAGTAAAA       7500

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GTGGAAGCTA TTAATAAAAA TATAATAAGG GAGAAAGATA GGTGTAATTT TAATTTTAAA       7740

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TGGATGGTAT TCATATAACC AACAACAAGC AGAACAACAA GCAAAAATTG TACAATTAGA       7920

AAAAGATAGC AAATCGACA AAGAACAAGT TGATAAACTA TTTGAATCAT TTGATGCATC         7980

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AGGTAAAGAC TATCTTAATA ACAAAGTCAA AGAATCATCT AAAGCAATTG TAGATTTTCA       8100

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TAGTCAACGC TAATAACTAT TTTAGAGCTG TGTTGTTTCG AATGGTTCCA AAACACATTA       8760

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AGTTTCATCT ACAACCTCAA AACCATGTTT TGAGCTGACT TCGTCAGTTC TATCTACAAC       8940

CTCAAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCCTA GTTTGCTCTT TGATTTTCAT       9000

TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCCTACGA       9060

ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTTATACAT CCGTTTTTCT CCTCTAACTG       9120
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997

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GAAAGATAAC TGCTAGAAAT GCGCCACCAA CTGCACCACC GATATGGCCT GCTAGGCTGA      9180

TTCCTGGAAT CAGAACACTT CCAATAATGT TAACCACAAA AAGTGTCAGA TAGGATTGCC      9240

CTAGCTGTTG GATATAAGGA TTGCGAGTTG CATAGCGAAG AACAATAATC GCGGCAAATA      9300

GCCCATAAAG AGAGGTAGAG GCGCCTGCTG CTAAGGATTT AGGACTAAAT ACAAAAACAA      9360

AGAGATTGCC CATCATTCCT GATAAAAGAT AGAGAAAGAA AAACTGCTTA GAACCGAAAA      9420

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ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAAAC CTGCTCGGGA AAGAGGCGAA      9540

TAGCTGGCCC ATACATGGCT CCAAATCGAA ATAATGTATC TGCCCTGTCA AAGTTTCCGC      9600

CTGCAGTGAC CAACATTAGT AAAAATACCA AGGCCGTCAC TAAGAGGAAG AAACTCGTCA      9660

CAGGGTAACG TCTATCAAAG ATTTCCTTCA TCAATTAATA CCTCCTGAAC AGGAATATCA      9720

TGGTTTTCAG GTATAAAGTC CTGAATTTGA CAAGGATATA TCGTACTCAA AGTACGACCA      9780

GAAAAATGTT CCAGATAGCG GTCATAATAG CCTCCACCGT ATCCTATCCG ATATCCTTTC      9840

GTCGTAAAAG CCAGACCAGG AACATGAATC AAATCAATCT GAGATGCATC CACCACTTCC      9900

AAATCTCCCT GTAGCTCCAG TAAGGCAAAG AAAGTTTTTA CCAACTGTTG CGGATCATAG      9960

ACCACAAAGT CCATGCGCCC CTTGGGATAA GTTTTGGGTA TTAAAACCTT CTTGCCGTCC      10020

TTCAGCGCCT GCTCAATCAG TTCCTGCGTT TGAAACTCAT GAGAAAAAGA GAGGTAGGTT      10080

GCGATGACCT TGGCTTCTTG ATAAAAGGGG TGTTGTAAAA GCCGCTCGGT TAAAGCTTGG      10140

TCTATAGCCT GTTTTTGCTC TTGAGATATA GCCTTCATTT CATGCAAGAC TTGCTTGCGT      10200

AATTCCGATT TCATAGACAA GCCCTCTATT CTGCTGCCTT CTTTTTCAGG AAACTAGACA      10260

CCGCAGCCAC CCCAATAGCT AAGACTTCTT CCTTAGGACT CATTTGAGGG TGATGAAGAG      10320

CGTAGGGACT ATCGATACCT AGCCAAAACA TCACGCCATC AACCTTTGAA AGGAGATAAC      10380

CAAAGTCCTC GCCTGTCATA GCAGGTTCGA TATCAATCAA CTCGATTCCG TCTTTTTCGT      10440

CAAAGAAGTC CATCAGTTCA CGCGCCAAGG CTGGATTGTT CTCAACAGGT AGGTATCCAC      10500

CTTGTTTGAG TTCCACTTCG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG      10560

TTTTTACCCT CTTTTGCACC AAGAGACTCA TGTCCTGTGT CAAGGCACGA ATAGTTCCAT      10620

GTAAAAAAGC TGTGTCTGTG ATGACATTGT TGGTGGTTCC AGCTTGAAAA ACGCCGAAGG      10680

TCACCACTGC TCCCTCGATT GGGTTGACAT TGCGGCTAAC AACTGACTGC ACTTGGGTCA      10740

CAAAGTAACT AGCCGCCACC AAGGCGTCAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC      10800

CTTTGCCTTT GAAACGGATC TTCACCTCGC AAGTTCCTGC AAAGAGTGTA TGAGTATTAG      10860
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998

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TCGCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA    10920

ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTTCTTCAG    10980

CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTGCTC CTCAAGGGCG CGCTCAAGAC    11040

AGCCTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTT    11100

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ACAACAGAGC TAGGCACAGC AGTTGCGAGT TGCCCCTCAA AGGTTACTTT GACACTGGTT    12060

TTCTTTTCAG CATTGGCGAT AAATTGGATA ATTTCTTGAG CGTTCATTTT TGTAGCAGTC    12120

ATAGGTG                                                            12127
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(2) INFORMATION FOR SEQ ID NO: 149:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12566 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

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CCATCCTTCT GTTGATGTGA CAGGAATGAT GATAAATCAA CCAGTAGCTA GTCGCGAAGA    60

GGTGACAGAG GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT    120
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999

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CGTTGAGCCA AATGAAGCTG GAGAAACACG CTTTACCTAT GCCACTTATG GTGAGGGAAA      180

GCTTCCAGAA GGTCTGACCA TTTCCTCCAA GGAGAGTGCA GAAACGAGTG ATTTATTAGG      240

GTCTTACTTG ATTGTATCAG GAAGTTTGGA TGGAGTGAGC TTACAGACCA CCTTGAAAGA      300

GCTTGGTTAT CAAGGCTTTG TTTCGAATGG AGAAGATCCA TTTTCGATAG TCTTACTATT      360

GACGGCCACC CCTATGGTGC TACTGAGTTT AGCTATTTTT CTGCTGACCT TTATGAGTCT      420

GACCCTGATT TATCGGATCA AATCCCTTCG TCAGGCAGGG ATTCGCTTAA TAGCTGGTGA      480

GAGCTTGTTT GGAGTTGCTC TCAGACCAGT GTTAGAAGAT GTGAGACAGC TTATCTGCTC      540

AGTGCTGGTA TCCAGTCTTT TGGGATTGGG GATTCTCTGG TATCAAGGTG CCTTGTTTAT      600

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TTCTACCTTA CTAAGTGTCG TCTATCTACT TGGTTTACAG GAAAATAGTC TGGTGGATCT      720

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GACATTTACT GAAGAACGGT TAGCCAATAC AGACTCTTTT TATATTATGA GCAATGTTGA     1020

CAATTTCTCA GATGGAGCAG AAGTGGACCT AGATGGCAAT CGTCTCAGTG ACTACACACC     1080

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TGAGAGCTTG CGAGAGCAGT CTGTCTACTA CCAAGGATTG TTTACAGATT ACCTGCAAAA     1260

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TGAGCTTCAT GGCAAGTATT TACTGGCGCA AGGAGGAGTT CTCTTGCTTG GCCTAGTCCT     1800

ATCTAGTATT TTGACAAGAG ATGGTTTGAT TAGCGCTCTA GTTGTAGCTT TGTTTACGCT     1860
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CGATTTTCTC TGGTTTGAAT CTCAAGCTGG AGAAGGGCAA GGTTTATGCC TTAATCGGAA     2040

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GTGGAAGGGT TCTCTATCAG GGGAAAGATT TAAAAACCAT TCCCACTCGT GAGTATTTTC     2160

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GTATTACATG ACAGCCAAGG TTGCCTTTAT CGTGCCTCGT ACGGTCTTTG TGCCAGCGCC     3600

AAATGTGGAT TCAGCCATCT TGAAAATGGT GCGTCGTCCA GAGCCAGCCG TAGCAGTAGA     3660
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1001

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GTGGAATAAC TTGACAGGTT ACTTTGGTAA GACTGAAGAG GTCAAGGACA AGCTGACCAA    3780
GGCTTTGGAC CAGGCAGGCT TGTCACCAAG TGTGCGTGGG GAAGCTCTCA GCTTGGCAGA    3840
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TTAAAGCCTT GGCAGGTTTC TACTATGTGG AGAGTGATGG CCAGGTTTAT CAAACACGCG    3960
CGCGTGGGAA TTTCCGTAAA AAAGGCCATA CCCCTTATGT TGGGGACTGG GTAGATTTCT    4020
CTGCCGAGGA AAAATTCAGAA GGCTATATCC TCAAAATTCA CGAACGGAAA AACAGTCTGG    4080
TTCGTCCGCC TATTGTCAAT ATCGATCAAG CTGTAGTAAT CATGTCCGTC AAGGAACCTG    4140
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TGTTAACAGG CAAGGTTACG GTCTTTATGG GGCAGACAGG TGTTGGGAAG TCAACTCTTC    4380
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CTGCCAGAAA CCATGGATAA GGTCCGTGAG TTGGTTGCTC TTCGTGAGGA AAAAGGTTTG    5280
AACTTTGAAA TCGAAGTGGA TGGTGGGATT GATGACCAAA CTATTGCTCA AGCCAAAGAA    5340
GCCGGTGCGA CTGTTTTTGT AGCAGGTTCC TATGTCTTTA AGGGAGAAGT CAATGAGCGA    5400
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1002

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GTACAAACTC TCAGAAAACA ACTGGACTAG GGTTGCAGTT TTTGCAGGCG GAAACCGCGG    5460

TCATTATCGG ACAGATTTTG ATGCTTTTGT TGGGGTGGAT CGAGGCTCGC TCTGGGTCTT    5520

GGAAGAAGAC TTACCTCTTG CTCTAGCAGT CGGAGATTTT GATTCTGTGA CGGAAGAAGA    5580

GCGACAGGTG ATTCAAAAAG GTGCCCAGTA TTTTGTCCAA GCACGACCAG AAAAGGATGA    5640

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CAATCCTAAG TTGGCACCCT ATATGCATCA AATAGAAATT GAGGATGGGC AAAAACTTGAT   5820

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CAGACCAGTT GGATTACCGC TTTGACCAAG CCAGACAAGC CAGCCAGTTA GACCAAAAAG    6240

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CGGTCTTCTT TGATGATTTG AGACGGGAAG AACAGATTAT TGTTGCAGGA CCAAGTACCC    7020

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CCGACCATAT CAGCAAGACT CTTGCCAGTG TCAAGACCGA GTTTGGCAAG TTTGGTGGTA    7140

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1003

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1004

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TGAAAAACAG ATTGCTTTCT AAAAAATAGG CAAAAATCTT GTTTTTCCTT CAAGTCGTGA     10740
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1005

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TGGTATTCGC TTTATTGTCT TTTTGCAGGG CTGTCACATG CGTTGCCAGT ATTGCCACAA   10920

CCCAGACACT TGGGCTATGG AGTCCAATAA GTCACGTGAA CGGACGGTAG ATGATGTCTT   10980

GACAGAGGCC TTGCGCTACC GTGGTTTCTG GGGAAATAAG GGTGGGATTA CAGTCAGTGG   11040

AGGAGAAGCT CTCTTGCAGA TTGATTTCCT GATTGCTCTC TTCACCAAGG CTAAGGAACA   11100

AGGAATCCAC TGTACCTTGG ACACCTGTGC TCTTCCTTTC CGTAATAAAC CACGTTACCT   11160

TGAGAAGTTT GACAAACTCA TGGCTGTCAC TGACTTGGTT CTTTTGGATA TCAAGGAAAT   11220

CAACGAAGAA CAGCACAAGA TTGTCACTAG CCAAACCAAT AAAAATATCT TGGCTTGTGC   11280

CCAGTATCTA TCAGATATTG GAAAACCTGT CTGGATTCGC CACGTGCTAG TTCCAGGATT   11340

GACAGACAGA GATGATGACT TGATTGAACT TGGTAAGTTC GTCAAGACCC TCAAAAATGT   11400

TGATAAGTTT GAAATTCTAC CTTATCACAC CATGGGTGAG TTCAAGTGGC GTGAACTTGG   11460

AATTCCATAT TCCCTCGAAG GAGTCAAACC ACCAACAGCA GATCGCGTCA AGAACGCTAA   11520

ACAACTCATG GATACCGAAA GTTATCAAGA TTATATGAAA CGTGTACATG GATAGAAAAG   11580

AAGCCTGATG GAAACATCGG GCTTTTGACT TGCAAAAAGA CTTAGCAAAT CAGCTAAGCC   11640

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TGTGATAGCA GTTGGTTGTT CAGGGGTAAC GTCTTTTCGT CCACTTGGTT TAGAGAAAGC   11760

ACTTGCTTTT GGTGGGTTCT TGGCTAGTTC TTCACGGACT TTTTTGCGAA GTTTTGGACG   11820

AACGATATAG TTGACGATAA ACTGTTGGAG AATCATCATG AAACCACCGA CAACCCAGTA   11880

AAGTGTGACA CTAGCTGGTG AGAAGAGGGA GAAGACGACG ATCATGAGTG GGCTCATGTA   11940

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CGATTGAAGA TAGTAAAGGA CACCAGCACA GGCAACCAAA ATCATACTTG GAGAACCTAG   12060

AGGAATGCCT AGGTAGCTTG CTTGAGCAAC CCCTTCAGTA TGTTGGGCAG CAAAGTAGAT   12120

AGCAGAGAAG AAAGGCATTT GAAGGAGGAT AGGGAAACAT CCTACACCGC CAAACATGCT   12180

GATACCGTGC TCTTTTTGAG CAGCAAAGAG AGCTTGTTGG GCTTCGAGTT TTTCTTCTTG   12240

AGTAGTCGCT TCTTTGAGAC GCGTTTGGTG TGGCTCAAGG ACGTGCTTGA GGGCGTTCAT   12300

CTTTTCAGAG TGAAGCGTTG CCTTCCATGA TTGGTAGATA CCAAGTGGTA AGATAATCAA   12360

GCGTACGATA ATGGTTACGA TAATGATAGC GACACCAAAG CCTAGACCTT TATCAGTAGC   12420

GAAGTACTTG ATGGCTTCAG CCATAGGCGC TCCGATCGTA TTCCAAATAA ATCCTGTTGG   12480
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1006

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CTGACCTGTG GTTTTATCGA CATTGACACA GCCAGTCAAG ACAAGCAACA TAGCCACTCC    12540

CATAGCCGAG AGTGCAAAAT CGGGGT                            -              12566
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(2) INFORMATION FOR SEQ ID NO: 150:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5238 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

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TGACACTCTG TAGGATTGTC GTTAATTGAT TGCTCGTACT CTCTACAATA ACCACCAAAG     60

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TGATTATGAG TTACCTCTGC AGAAAGACTC GTAAGTCCTC TAGATGATGG CCATATACCA    180

GTTTTCGCAT AAAAACCACA GTCCATGATC CAAGCACATG GAGAAATACG CATAGCTGAT    240

CCATTCCCAA AGCTATTATA AGGCTCACGG TTATCGCTGT TTAGCCATGC ATTAAACCGA    300

GCACCGTAAT CAGCATTCGG ATACATTCTG CCATATTTCT TCATCGCGTC AATGAAGTCA    360

TCTTTTTGTC CACCATTCAT AATTGCTTCT GCAACAGCAC AGGTCATAAC CGTGTCATCT    420

GTAAAAAAGC AGTCCTTCCG AAATAAAGGA AAGTCCTTTG TTTTGATATT GTTCCATTCG    480

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ATTTTAAAAA TTTCATTTTT TTCAAAATAG GGTTTTACCA TTTCTTTCCA CCTAGCTCTA    660

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ACTTCAACAA CAAGTGTTCT GCCATCGCGA GTAACACCGA TATCTAGTCC ATAAGCTATT    780

GGCGCATCTT TCCAACATGA TATCGCTTCA TCAATTACAC TTGCATCAAA TTGTGCATGA    840

TAATCACCTG TATAGGGTCG AACATCTAAT ACGCGACCAT CTAACACAAA ACAACGCCAT    900

TCAGCTATGA ATTCTACAAC CTCACTAATC CATATAGGAT AGTCGAAAGG TAGACCAATA    960

CCTATTAAAT CATGGGTTCC ATTAACAACT CTTCCAGTAA AGACTTTTGA ACCAGCTTTA   1020

GGCTTAATAA ATTTTCCCCA ATTATCAGGT ATATTCACAA TCTCTCCTAA AATACCAGCA   1080

TAAATCTTTC GACCATAAAA CTCTTTAAGC TCAATAGGAT AGTCATGAAC CGGAACGTTT   1140

AAGCCCATCA TTTTTAGTAA TGCTCTAGTC TCCATTATAT AATCTACAAC TATATCTTCA   1200

CTTGTTAACT CTTTTATTTC AGAAAAAGAT TGATATAAAA TAACTTCTTC TCCTTGTAAG   1260

TAGGCACCTA CTTGAGCATT GTATTTATTA ATTGAAACCT CACTTGGTAA TTTACTTTGT   1320
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1007

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CTAATATAAA CAACCATTTC ATCACTCCTA TATCACTAGT GTTACACCAA TTTGTAAAAA      1380

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ATCAACGGTA TTTAGGAGTA ATTCAATAAC CTGGGACTTT GTTAGTCGCA TTCCCCTTCT      1500

ATCTCTAGCA TCTTCTACTA AATTTTCAAG TTTCTCTAGA TTTTTATCAT CCAAGCTAAT      1560

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AACAATATTT CCGTTAAAAA TAATTTCCAT ATAATCCGGT ATGTTTTTAG GATTAAAATA      2340

CTCCACTTCA AAACCATCTT CTGTTTCCAG AGTGTATCCC GGGATTTGAG CTACAAAGGC      2400

TTTCCCATCT TCTATGGAAT CAAATGCTAC TAAATCTTTA GAATAATCAT TTTGGTACAA      2460

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GTCTTATACC CAGAACACAC CTTATCGACC TTCGGTCTCA CCTCGTCGCA TTGGCTGAAC      2640

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TTTATAGAGC TTATCAAAAT AGATCAGAAC CTTATATATG TTATCTCCTG TAAGCTTTTC      3000

AGCTTCAATA GTCTGTTTCT TTGCTTTCGC ATCAATTAGT GATGATTCTA ATTCATCTAG      3060
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                                    1008
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CTCTGCAACA GCATCATCTA ACAATTCTTC TCTAATTTGC TTACTGAATG TACACTTATT     3360

ACCTCTTATC ATCTGCCTAT GGTTACAACC ATAGTAATAA AAATCTTTAT ACTTTGTGCC     3420

ATCTTTCTTT TTCTTGATAC ACTTGTTCCC AAACATTCCC ACTCCACATA TCGGGCATTT     3480

TACAATTCCA GAAAGCAAGT GTGTGCGTGT ATCTTTTCCT TTATTCACAT GCTCATATTT     3540

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AAGTGCTTTG GATTAGCAAC ATAGGAATCT CACTTCCGCC TCTATTCCGG ATGAGCCGGC     4800

TTCAACCTTA GAAGTATCAT TACCCTCATT TTCTTCATAG CGGATAGGGT ATCCCTCCCT     4860
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1009

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ATATTCAAAC TCTTACTTAT CGCTCACTTT CTTTTTGCTT AGCAGAACTT TTTTTGCCGA        4920

ATTATTCAGC CGAAAGATCT TGACGGATAG GTTATTACGC TCCAAAAATA ATTAACGTCT        4980

TGTCTTGGTC TATTCAATTG TTAAGGTTCA AAATTTATCG AGAGTTATTA ATCTTTTTAA        5040

AATTTGACCA TCAGAAAATA TTTATCTTGA TGTAACAAAA TTCTATAAAT TACCCTCTTA        5100

TACTTAACAG TGAAAAGAAG TCTTTCTTGG TAACCAATTT TGAAATAGAA TTTGCTTATA        5160

TAAAAAGGTC CAATTCCCAC TGCATAAATA GCAGTGAAAA TTAGACCCTC TTGGTAACTG        5220

TCATCTAAAA GTCTTCTA                                                      5238
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(2) INFORMATION FOR SEQ ID NO: 151:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13425 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

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AAATCTTGCA GTTCATGCTT ATACTTTTTT AAGAAATCTA GAATCATAGA TACGGTAGAT        120

GACATCGTCT GGTTGACATT GGTCAAAATA GAACAAACCA AAACGACTCG TTCTATACCT        180

CCAACCTTTC AAATGCATCT CATGTAAATG TTCTTCTTCC TTGTCCAAAT CAACAATGGT        240

GAAAATCCGA AATTCTACTC TGCTATTCAT TGTCTTACCC CAAAATTAGA AAACATGCCT        300

GGCGTTATTT ATTAGATAAT TCTTTCCACT TTTGACTCAA TCTCCAAAAA ATATAAGAAA        360

TCTGAATCGC AAAAACTATC AATAAAACCC AATCTATTAT GAAAATCAAA AACACTTTCC        420

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ATACTTTCAA AATGTTTAAA TGTGATTATT TATTTTTGAA AAATAGATCA CCAGCCCGAC        660

TGAAAGTGCT TATAGAATGA TAATAAGTCG CCTGCCGAAA ACAGCGAAAA ATAGCGGTGT        720

TATGCGGAGA TAATCTGACG CGATGCGAAA GTATATTGCA TACTTATTTT CAACAATTTA        780

GCAGAGTATT TTTATAAGTG TGATATAATA GAAGTATAAT TTGTTCTGAT AGTTTATTTT        840

ATGGAGAAGT AGATTTTTAG AATGCGGAGG GTTCAATATG GTTGAGTTTA TAAAGTCTAA        900

GAAAGAAATG AGTGAGGAGG ATATTAAAGC AAATTTCATC ACTCCTGCTA TTGTATCCAA ·      960
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                                          1010
AGGATGGAAA AATGGTGAGC ATATCGCTTA CGAAGAATAC TTCACTGATG GTCGAATTGA    1020

AGTTAGAGGA GATAAGGCTC GTCGTAAAGA AGGAAAAAAA TCAGACTATT CACTGTATTA    1080

CCAATTTGGA ACTCGAATTG CAATTGTTGA GGCAAAGGAT AATAAACACA GCGTTCGAGC    1140

AGGATTACAA CAAGCTATTG AATATGGAGA GATTTTAGAT GTTCCATTTG TTTATTCTTC    1200

GAATGGTGAT GGCTTTATTG AACACGACCG TATCACGAGA GAAGAACGTG AGCTGGAGTT    1260

AGACGAATTC CCTACTCGTG AAGAATTATT TTCTCGTATG ACGAAGGAAA AAGGATTGAC    1320

GTACGAAATT ACAGAAGCTA TCTCAACTCC ATACTATACA GACGCCTTCT CAATGAAAAC    1380

GCCACGCTAT TATCAGCAAA TAGCTATCAA CCGTACTATT GAAACAGTTG CCAGAGGACA    1440

AAAACGAGTA ATGTTTGTGA TGGCAACAGG AACGGGGAAA ACGTTCATGG CTTTTCAAAT    1500

TATTCATCGC CTTCGAAAAG CTGGTTTGGC TAAACGAGTT TTATTCTTAG CAGATAGAAA    1560

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GCTTTATCAG CAACTAACTG GTGAAGATGG AACTGAAACA CATTATCAAA AATTTGACAA    1740

AGACTTCTTT GATTTAATCG TAATTGATGA AGCGCACCGT GGTTCAGCTA AGGAAAACAG    1800

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TGATAAAACA ATTGTTTTTT GTGTTGATAT TGACCATGCC GAGCGAATGC GTGCTGCACT    2220

TGTAAAAGAG AATCTAGACT TAGTCCAAGA AGACTATCGT TATGTCATGC AAGTAACTGG    2280

TGACAACGCT GAAGGAAAAG CTCAACTGGA TAACTTTATG GATGTCAATT CTAATTTTC:    2340

CGCTATTGTA ACAACGTCTA AATTATTAAC GACAGGAGTT AATGCTAAAA CATGTCGTTT    2400

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TGAAAACGGG AAACTGATTA CCGAAAGCCT GACCGACTAC ACTCGAAAGA ATATCTTAGG    2760
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1011

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TATCTTAGAC GAACTTTATA AAAAAGGAGT TTATCTAGAT GCTATTCGAG AGTCGGAGGG      2880
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AGAATTAACC AAAACGGAAC GTATCAATAA ACTCAAACAA AGCGGATATT TATATAAATA      3000
TAGTGAGGAA GCGCGTGCTG TTTTGGAAAT TTTACTGAAC AAATACATGG ATAAAGGTAT      3060
TGGAGAACTC GAAAGCATTG AAACATTAAA ACTTCCAGAA TTTCAGATAT ATGGTGGAAC      3120
CTTCAAAATC ATCAATACTT ATTTTGGAGA TAAAAAACGA TATTTACAAG CAATTAAAGA      3180
ATTGGAGCAA GAGCTATTTA CAGTAGCTTA ATGAAAGGAA AGTATGTCAA TTACATCATT      3240
TGTAAAAAGA ATTCAAGATA TCACTCGAAA CGATGCTGGT GTTAATGGTG ATGCTCAACG      3300
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GGCTCATGCT CAAAATGGGG AACGGGTATT GACAGGCGAT GAATTACTTG ATTTTGTCAA      3480
TAACAAGTTA TTCAAAGAGT TGAAAGAGCT TGAAATAACT TCAAATATGC CTATTCGAAA      3540
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TGTCATTATG TATCGTTTGA AAGAAAATGG TCGTGTTGGA GTTATTTTAC CTGATGGTTT      4200
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GCATACGATT ATTAGGTTGC CTCATAGTGT CTTTGCACCG TATACAGGAA TCCATACGAA      4320
CATTCTTTTC TTTGATAAAA CAAAGAAAAC AGAAGAAACT TGGTTTTATC GTTTAGATAT      4380
GCCAGATGGT TATAAAAATT TCTCGAAAAC TAAGCCGATG AAGTCAGAAC ACTTCAATCC      4440
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1012

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CAAATAATGA CACCAGAACA ACTTAAAGCA AGTATTCTCC AAAGAGCGAT GGAAGGGAAA    4740

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1013

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AAAAATAGCA GGTAGTCAGT TTGACCACCT GTTATTTTTT ACCAATTAAC AATTTTATCT        6840

ACAATATTTT GTTGTTCAGT AGCTGTTTTC CTTAGATAAA TTCGAGTAGT TTCTATACTT        6900

TCGTGTCCCA TCAAATCTGC AAGCAAGGCA ATATCATTAT ACTTCGCTAA AAAATTCTTA        6960

GCAAATAAAT GCCTAAAAGA ATGAGGGTAA ATTACGTTAG GATTCATTTT GTATTTATCA        7020

GCATAATTTT TTAACTGTTG AGCAACTCCT CTTGCTGTAA TTGGTTCGTT AAATTTATTC        7080

AAAAATAAAT AACCACTTCG GCGATTTTCT GATTCTAACC AACTAAGACA ACTATTTCTT        7140

AATTTTTTAG GAATGTACAG TCTACGAATT TTACCACCTT TTGAGTAAAT GTCAAAATAA        7200

CCGATTTCTA CATGCTCTAC TTTTAGTTTA ATAAGTTCAC TTACACGAGC CCCAGTTGCA        7260

CCTAAAAACC AAACGACAAA ATGCCATTTT AAAATACCAT CTTTTTTCAA ACTACGTTTA        7320

AGAAAAAGGT AATCAGCATG GCTAATGACA TCTTCTAAAA ACGGTTTTTG CTGTACTTTG        7380

ACAAATTTTA ATTTCAAATC ATCATGACCA ATAAAAGCCA GATATTTATT TACTCCTTGT        7440

AGTCGCAAAT TGACAGTTTT AGGTTTAAAA TTGTCTAATA AATATCCTTT GTATTCAAAT        7500

AAATCTTCCA TTTTGAGTTC GTAATTCTCC AAGAAAAATC GAACACCATA AAGGTACGAA        7560

CGCACAGTAT TTTCAGCTAA ACCAGCTTTC TTCAAATGTA ATTCAAAATC TTTCAACGTA        7620

AAACTCCTAT CTTATGTTTG ATAGAAATTC CACCGCACGT AAAACTATTA TACTAAATTA        7680

GTGCGTCAAT ATGGGCGAAA AATTGTTCGA TTTTATCAAC GATTCTGGAT TGTTCAGGAA        7740

GGGGTGGGAG GGGGATTAAA TATTCTTTTA TAGTTTTCGT TAATAATTCT TTTTGTTTTG        7800

TACTACCCGA CGCTTTTTCT TCAATAACTG ACTGAACAAT AGGAGAGGAA AGAAAATTAT        7860

AGATGAAATG GCAATTAATA ACCCCCGATA AGACTCTTAT AACTGTAACA TGGCTATCTG        7920

CAACAGCCCA GCCATAAGGA TTTTTATTTT CATGGTAAAT AGCTAATCGT CCTAACGTAC        7980

CTAGACCTGT TGAATTCCAC ATTAAATCAC CATCTCTTAG TAATCTTTCT TTCTGGTAAC        8040
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                                    1014
TATGAACTGT TTCGGGATCA ATAAATCTTG CTAAGTCAAT AGAAAAGCCA GACCATTGAT    8100

TACATTTCTG AGCAATCACA GGGTATATAG GAATATTTGA ATATTTTGGA GACTTCCCTC    8160

TTTGAATGTA GGAGGTTATA TCGTTTAACC TCACCCATTC CCAACTTTCT GGTATTTCAC    8220

AAGGTACTTC CTCATAATAA GAGTTATCAT CTCCTTGGGA AACAATAGAA ATGTCCAAAT    8280

CTTTCTTTTT AATCTTGCCT TCTTCAAAGA GTTTTTGTTT TTCTGCTCGT ATTTTTTCAA    8340

GTAAAACTTC GACTGATTCA TCATTTGGGT CTTGTTCAAC TAATTTTCCT TGCATAGCAT    8400

ATTGAAGAAT AGATTTTTTT AGTTTATCTG GAAATTCTTT ATCTAGCTGT TCTAGTCTAT    8460

TATAACTTTC AGCATATTCA TCTACTTTTT CTAAAGCTGA TTCGATTGCT TCTACTATTC    8520

GTTGTTGTTC GGATAGTGGG GGGAGAGCAA TTAATAATAG ATTAAAATTA TAATCATTGA    8580

TTGCAGGATA ACTTGTTCCA GTAGATTTAT TATTAACACG ATTGATAAAA TTATCTGATA    8640

ATAAATAATA TTTCAAATAT GTTTCGTTAA GTAAAGTATC CAAAACAATA AATGCTGTAC    8700

TAGCTATCAA ATACTCTTTA AGTTCTCTAA CTACAGCAAT ATTTTTTAGA TATGGTCTAA    8760

CTGTTGAAAA TAAGACACTA TTCTGCGAAA CTAATTTTCT AGCACGGGAA GGCGCTTGTT    8820

CAGGTGAAAG ATATTGTAGA TTTTTGTAGT TGATTATGTT CTTTTTTCTA TCAATACTAG    8880

ACGTATCTAT ATACCTAAAG GATTTCTCTG GCTTATTTTG CCCAAAATTC CAATAAATTG    8940

ATTTTATCCT CACCCACTCC CAAGTATCAG GAATATCATA AGGAACATCA ATTTCTTGAG    9000

TGCTTCCATC AGCAAACTTC CCATAATGTT TCTTATGTGC TTCAAGTATA TAAAAAGGCG    9060

TAAAAATACG CCTATAGATA ATGGGGTTGA AATAGGTTTA TTGTTGATGA GATTGTAGAT    9120

AATTCAATTT TTTACTTCCA ATCGAATATT CAAATCCTCC ACCTTTTCTG CCTGTAATTG    9180

TTCATCATAA AATTCAATAT CTTCAGGATT TTCCCCTTGG CAACCTCGGC AGAAATATTC    9240

TTCCGCTCGA TCAGGATTCA AAAATCGACA AGCACAAACA AAACAGTCGC CATCATCATT    9300

TATTGAGATA ATATAGTAGA TTGAAATAAG ATGTAAACAA ATCGATTAGG AAAGTTAAAT    9360

TAGTTTCTAG AAATTTTTAG CAGATGTAGT GTACTATTCT AGTCTCAATT TACTATGGCT    9420

TCAAATATAT CTTTCGAAAA AATATTTACA GATGTGTAAT TTTGAAGCTT GCAAAAGTTA    9480

GTAAACTTGT AGATTTCGAT TTGAAGTAAC TTGTTTTCTT GCCCGATATT GTTTTTGAAA    9540

TTGAATTTTT CCATAGTGAC TCCTTAATTT TCTTCTACAC GTCTGATGAT AAATCTAATT    9600

CGCAAAAGAG TCAAGAGGAT TTTTCGAAAA ATAAATAGCG ACCGAAATCG CTATTTTAAG    9660

GGTTATAGGT ATTTGATGGC TTAGACTGCT GTGTGACTGT TTACCCACAG GCAATCTTTC    9720

TTCTATATTA GTATTAGTAA AGGTCTAAAT AATTATCAAT TTCCCATTGT GAAACGAAGG    9780

TTGCATAACT TGCCCATTCG ATTCGTTTGG CTTCAAGGAA GCTAGTATAG ATGTGATCTC    9840
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1015

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CGAGAGCAGC TTTAACCACT TCATCTTCTG TCAAAGCTTT CAAAGCGTTG TGAAGAGTTG    9900

ATGGAAGGTC TGTAATACCA GCTTCCTTGC GCTCTTCTGC TGTCATGATG TAGATATTTT    9960

CTTCGATAGG AGCTGGTGCT TCGATTTTAT TTTCAATACC ATACAAACCA ACTTCCAAAA   10020

GAACAGCCAT AGCAACGTAA GGGTTCGCCA TTGGATCCAC TGAACGCAAC TCAAGACGAG   10080

TTCCCATACC ACGTGAAGCA GGTACGCGCA CAAGTGGCGA ACGGTTACGA CCAGCCCAAG   10140

CAATGTAAAC AGGCGCTTCA TAACCTGGAA CCAAACGTTT GTATGAGTTA ACTGTTGGGT   10200

TCATGATGGC AGTATAGTTG TAAGCATGCT TGATCAAACC GCCTAGGAAA TGGTAAGCTG   10260

TTTCTGACAA CTGCATTCCT TTTGGATCAT TTGGATCAAA GAAGGCGTTA TTTCCTTCTG   10320

CATCAAACAA GGACATATTA CAGTGCATAC CTGATCCAGC AATACCAAAT TTTGGCTTCG   10380

CCATAAATGT TGCGTAAAGT CCGTGTTTGC GAGCAATGGT TTTAACAACA AGCTTAAAGA   10440

TTTGAATCTT ATCACAAGCA CGGAGAACTT CATCGTACTT AAAGTCAATC TCATGCTGTC   10500

CAACCGCAAC CTCGTGGTGA CTCGCTTCTA CTTCAAATCC CATTTTGGTC AAGACATTCA   10560

CAATCTCACG ACGTGTGTTG TCCGCAAGGT CAGTAGGTGC CAAGTCAAAG TAGCCACCCT   10620

TGTCATTCAC TTCAAGTGTT GGGTCCCCAT TTTCATCCAA CTTAAATAGG AAGAATTCTG   10680

GCTCTGGACC AAGGTTGAAG GATTTGAATC CAACTTCTTC CATGTGACGA AGAGCTCGTT   10740

TCAAATTACC ACGAGGGTCA CCCGCAAATG GTTCACCTTC TGTTGTATAG ACATCACAGA   10800

TCAGACCTGC AACACTTCCA TTTTCATCTC CCCAAGGGAA GACTGTCCAT GTATCCAAGT   10860

CCGGGTACAA GTACATATCC GACTCATTGA TACGTACAAA ACCTTCAATA GAAGATCCAT   10920

CAAACATAAC CTTGTTCGAC AAGACCTTAT CTAACTGTTC ATCTGTAGCA GGAATTTCGA   10980

CGTTTTTCAT GGTTCCCAAA ATATCTGAGA ACATAAGACG AATAAAGGTA ACATTTTTTT   11040

CCTTGACTTC ACGACGAATA TCTGCAGCTG TGATTGGCAT AAGTTTTCTC CTTAATCTAT   11100

GACTACTTGC GGTTGCCTAA CCGCGACCAA AAGGTGACTG TACTGAAGCA AAACGCCCCT   11160

GTTGGAGGAG TTCATTGTGA AGTGCACGAC GTACTTCAGT CTGACTAACC GCTTTCTTGG   11220

ATTTCGCTTC ACGTTCAGCA TATTTTTTCT TAATGGCAGC GATATTATAA CCTTCAGAGA   11280

TATAATCTTT GATTTCAAGC AGACGATCCA TGTCATTCAA GGAATACATG CGACGATTTC   11340

CTTCGTTTCG ATCGGGCTTG ATCAACTCTT GATCTTCATA ATAACGAATC TGACGCGCCG   11400

ATAGATCGGT CAACTTCATA ACACTGCCGA TAGGAAAAAC AGCCATATTT CGGCGAAATT   11460

CTTTTTCCTT CATTTACAAT TTCCTTCTTT CTGTCTATTA TAGTCTAAAA AAAGACAAAC   11520

GTCAATTGAT AATGTTATAA AATGTAACAT TATTTTTCTT TTTTCTCTAA AAAGAGACGA   11580
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                                    1016
ATACGATCAA TATCGTAATT TACGATAATT GCGACAAAAA CTCCCATAAA CGTTTCTAAT    11640

ACACGCACAA ACACGTACAA AATTGTCTCA CCACTTGGAA TTGATAGGGT AATGATTAAC    11700

ATAGCTGCTA CACCACCAAT AACCCCTGCT TTGTTATTCA TGGCTACATT TGTCATAATG    11760

GTTAACATGG TGCAGATTGG AACAACTACC AAGGTCACCC AAAAGGCTTC GTGGAAAAAG    11820

GTATTTAATA AGAAGAAGAC CAAGGCATAG AGTCCACCGA TACTATTTCC TAGAATACGC    11880

GAAGTCCCAA AATGAACACT CTCATCAAAA CTCTCCCTCA GGCTAAAAAC GGCTGTCAAA    11940

GCACCAATTT GAAGACCTTT CCAGCCAAAA AAGCCAAAAA TCAAGAGAAC TAGAAAAACA    12000

GCAATACCTG TTTTAAAGGT TCGCATACCA AGTTTGAACT GGGATTTATC GAATTTATAT    12060

TTTTTAAAAT AACTCATAAT CTCAACTTTC TATTTCCATT TTATCATAAA TCGGTGATTT    12120

TTATGAGTAA TAGTTGAGAG GAAGCGTTTT TATTTTAAGC AAAAGAAAAG AGGAACTTTC    12180

ATCCCTCTCT TCTTTGATTT ATTTATAAAA TCTTATTTTT CTGTCAAGGC TGCAAGTCCT    12240

GGAAGAACCT TACCTTCAAG AAGTTCCATT GATGCTCCAC CACCCGTACT AATCCATGAG    12300

AACTTGTCTG CACGGCCAAG GTTAATCGCT GCGGCAGCTG AGTCACCACC ACCGATGATT    12360

GATTTAACTC CTGGTTGTTT CACGATAGCG TCCATCACAC CGATTGTACC AGCTTGGAAA    12420

TCTGGGTTTT CAAATACACC CATAGGTCCG TTCCATACGA CTGTTTTGGC ACCAGTCAAA    12480

GCTTCGTCAA ATTTGGCGAT AGATTTTGGA CCGATGTCAA GACCAAGGAA GCCTTCAGAA    12540

ACTGCTTCAC CTTCAGTGTC ACGCACTTCA GTGTAACCAG CAAATGCGTT AGCTTCTTTT    12600

GAGTCAACTG GCAAGATCAA TTTACCATTT GCTTTTTCAA GAAGAGCTTT CGCAACATCC    12660

AATTTGTCTT CTTCTACAAG TGAGTTACCG ATTTCGATAC CTTGTGCTTT GTAGAATGTG    12720

TAAGTCATCC CACCACCGAT AAGGACGTTA TCAGCTTTTT CAAGCAAGTT TTCGATAACA    12780

CCGATCTTGT CTGAAACTTT TGAACCACCA AGGATAGCCA CGAATGGACG TTCTGGAGTT    12840

TCAACTGCTT CTTGGATGTA GGCAATTTCG TTTTCAAGAA GGAAACCAGC AACTGCTTTT    12900

TCAACGTTTG CTGAGATACC AACGTTAGAT GCGTGTGCAC GGTGAGCTGT ACCGAATGCA    12960

TCGTTTACGA AGATACCATC TCCAAGTGAT GCCCAGTATT TACCAAGTTC AGGATCGTTT    13020

TTAGATTCTT TCTTGCCGTC AACATCTTCG TAACGAGTGT TTTCAACCAA GAGAACTTGT    13080

CCATCTTCAA GAGCGTTGAT TGCCGCTTCT AATTCAGCAC CACGAGTGAC ACCTGGGAAA    13140

ACAACATCTT GACCAAGTTT TGCTGCCAAG TCAGCTGCTA CAGGAGCAAG TGATTTACCA    13200

GCTTTATCAG CTTCTTCTTT CACACGTCCA AGGTGAGAGA AAAGAATTGC ACGTCCACCT    13260

TGTTCGATGA TGTACTTAAT AGTTGGAAGA GCTGCTGTGA TACGGTTATC GTTAGTGATT    13320

ACGCCATCTT TCAATGGTAC GTTGAAGTCA ACACGAACGA GGACTTTTTT ACCTTTCAAG    13380
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1017

TCAACGTCTT TAACAGTAAG TTTTGCCATG TTACAAAAAC TCCGG   13425

(2) INFORMATION FOR SEQ ID NO: 152:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 905 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

GATTTATCCT ACCGGnGAAT TTCCGGAGGG GTTCTAGCAG CAATCTTAGG AATCTATGAA   60

CGAATGATTG GCTTTCTGGC CCATCCCTTT AAAGACTTTA AAGAAAATGT TTTGTACTTT   120

ATTCCAGTTG CCATCGGTAT GCTTCTGGGA ATCGGCTTAT TTTCCTACCC GATTGAATAC   180

CTGCTTGAAA ATTATCAGGT TTTTGTATTA TGGAGCTTTG CGGGAGCTAT TATCGGTACA   240

GTTCCTAGCC TCCTCAAAGA ATCAACTCGA GAATCTGACC GAGACAAGAT TGATTTAGCT   300

TGGTTATGGA CAACCTTTAT CATTTCTGGA TTAGGACTCT ATGCCTTAAA TTTTGTCGTT   360

GGAACCTTAA GCGCCAGCTT TCTTAACTTC GTCCTAGCAG GCGCACTATT GGCCCTTGGC   420

GTCTTGGTTC CTGGCCTCAG CCCATCAAAT TTACTTTTGA TTTTGGGACT CTATGCTCCT   480

ATGTTGACTG GTTTTAAAAC TTTTGATTTC TTGGGAACCT TCTTTCCGAT TGGAATTGGT   540

GCAGGTGCAA CTCTCATCGT TTTTTCAAAA TTGATAGATT ATGCCTTAAA CAACTACCAC   600

TCACGCGTCT ATCATTTCAT CATCGGTATC GTCCTATCAA GTACCCTTTT GATCTTAATT   660

CCAAATGCAG GAAACGCTGA AAGTATCCAA TACACAGGAC TTTCACTTGT CGGTTATGTC   720

ATCATCGCCT TCTTCTTTGC GCTGGGAATC TGGCTTGGTA TTTGGATGAG TCAATTGGAG   780

GATAAATATA AATAATGGCA AAAAAAGTTA AAATCAAAAA AACATTGGTG GAACAAATCC   840

TATCTAAAGC AGCTATCCCT CATCAGGGGA TTCAAATCAA TGCCCTAGAA GGAGAGCTTC   900

CTCAA   905

(2) INFORMATION FOR SEQ ID NO: 153:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4278 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

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                                    1018
CTTGAATTAA ATAAAAAACG TCATGCGACT AAGCATTTTA CTGATAAGCT TGTTGATCCC        60

AAAGATGTGC GTACGGCTAT CGAAATTGCA ACCTTAGCGC CAAGCGCCCA CAACAGCCAG       120

CCTTGGAAAT TTGTGGTGGT ACGTGAGAAA AATGCTGAAC TGGCAAAGTT AGCTTATGGT       180

TCCAATTTTG AACAGGTATC ATCAGCGCCT GTAACCATTG CCTTGTTTAC AGATACGGAC       240

TTAGCCAAAC GTGCTCGTAA GATTGCCCGT GTTGGTGGTG CTAATAACTT TTCTGAAGAG       300

CAACTTCAAT ATTTTATGAA AAATCTGCCA GCTGAGTTTG CCCGTTACAG TGAGCAACAA       360

GTCAGCGACT ACCTAGCTCT CAATGCAGGT TTGGTTGCCA TGAACTTGGT TCTTGCATTG       420

ACAGACCAAG GAATTGGTTC TAACATTATT CTTGGTTTTG ACAAATCAAA AGTTAATGAA       480

GTTTTGGAAA TCGAAGACCG TTTCCGCCCA GAACTCTTGA TCACAGTGGG TTATACAGAC       540

GAAAAATTGG AACCAAGCTA CCGCTTGCCA GTAGATGAAA TCATCGAGAA AAGATAGAAA       600

GAAGAAAAAA TGACAGCAAT TGATTTTACA GCAGAAGTAG AAAAACGCAA AGAAGACCTC       660

TTGGCTGACT TGTTTAGCCT TTTGGAAATC AATTCAGAAC GTGATGACAG CAAGGCTGAT       720

GCCCAGCATC CATTTGGGCC TGGTCCAGTA AAAGCCTTGG AGAAATTCCT TGAAATCGCA       780

GACCGCGATG GCTACCCAAC TAAGAATGTT GATAACTATG CAGGACATTT TGAGTTTGGT       840

GATGGAGAAG AAGTTCTCGG AATCTTTGCC CATATGGATG TGGTGCCTGC TGGTAGCGGT       900

TGGGACACAG ACCCTTACAC ACCAACTATC AAAGATGGTC GCCTTTATGC GCGCGGGGCT       960

TCGGACGATA AGGGTCCTAC AACAGCTTGT TACTATGGTT TGAAAATCAT CAAAGAATTG      1020

GGTCTTCCAA CTTCTAAGAA AGTTCGCTTC ATCGTTGGAA CAGACGAAGA ATCAGGCTGG      1080

GCAGACATGG ACTACTACTT TGAGCACGTA GGACTTGCCA AACCAGATTT CGGTTTCTCA      1140

CCAGATGCTG AATTTCCAAT CATCAATGGT GAAAAAGGAA ATATCACGGA ATACCTCCAC      1200

TTTGCAGGAG AAAATACAGG TGTTGCCCGT CTTCACAGCT TTACAGGTGG TTTACGTGAA      1260

AATATGGTAC CAGAATCAGC AACAGCAGTC GTTTCAGGTG ACTTGGCTGA CTTGCAAGCT      1320

AAACTAGATG CCTTTGTTGC AGAACACAAA CTTAGAGGAG AACTCCAAGA AGAAGCTGGC      1380

AAATACAAGG TGACGATCAT TGGTAAATCA GCCCACGTGG CTATGCCTGC TTCAGGTGTC      1440

AATGGCGCAA CTTACCTTGC CCTCTTCCTC AGCCAGTTTG GCTTTGCTGG TCCAGCCAAA      1500

GACTACCTTG ACATCGCAGG TAAAATTCTC TTGAACGATC ATGAGGGTGA AAATCTTAAG      1560

ATTGCTCATG TGGATGAAAA GATGGGTGCT CTTTCTATGA ATGCCGGCGT CTTCCACTTC      1620

GATGAAACAA GTGCTGATAA TACCATTGCC CTCAACATCC GCTATCCAAA AGGAACAAGT      1680

CCAGAACAAA TCAAGTCAAT CCTTGAAAAC TTGCCAGTTG TTTCTGTTAG CCTGTCTGAA      1740

CACGGTCACA CGCCTCACTA TGTGCCAATG AAGATCCAC TTGTGCAAAC CTTGTTGAAT      1800
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1019

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ATCTATGAAA AACAAACTGG CTTTAAAGGT CATGAACAAG TCATCGGTGG TGGAACCTTT        1860

GGTCGCTTGC TAGAACGCGG AGTTGCCTAC GGTGCTATGT TCCCAGACTC GATTGATACC        1920

ATGCACCAAG CCAATGAATT TATCGCCTTG GATGATCTTT TCCGAGCAGC AGCAATTTAT        1980

GCCGAAGCTA TTTACGAATT GATCAAATAA AACGATAGAA GTCTGAGATC TTATGCTTGG        2040

ACTTCTTTTT GGAGGGAAAG TAGATGTCTC AAATCGAAAG AATCAAACAG GCTATCATGG        2100

CGGATTCGCA GAATGCCAGC TATACAGAGC GTGGCATTGA GCCTCTCTTT GCAGCGCCAA        2160

AAACTGCTCG CATCAATATC ATCGGTCAGG CTCCGGGACT TAAAACTCAA GAAGCAGGCC        2220

TTTACTGGAA AGATAAAAGT GGTGACCGCT TGCGGGACTG GCTAGGTGTG GATGAAGATA        2280

CCTTTTACAA TTCAGGTTAT TTTGCTGTTT TGCCTATGGA TTTCTACTTT CCAGGACATG        2340

GCAAGTCGGG TGATCTTCCG CCTCGTACAG GTTTTGCAGA AAAATGGCAT CCGCAGGTCT        2400

TACAGGAATT GCCTGATATT CAGTTAACCC TCTTGATTGG GCAATATGCC CAAGCCTACT        2460

ATTTACAGGA GAAAATCAGT GGGAAGGTAA CGGAGAGGGT GAAACACTAT AAAGACTATC        2520

TGCCAGCCTA TTTTCCGCTA GTTCACCCAT CACCACGAAA TCAAATCTGG ATGGCCAAAA        2580

ATCCTTGGTT TGAGGCAGAA GTAGTGCCAG ATTTGAAAAA AAGAATTAAA ACCATTTTAT        2640

AGTCAATGAA AATCAAAGAG CAAACTAGGA AGCTAGTCGT AGGCTGCTCA AAGTACAGCT        2700

TTGAAGTTGC AGATAAAACT GACGAAGTCG GTAACATACG CACGGTAAGG CGACGCTGAC        2760

GTGGTTTGAA GAGATTTTCG AAGAGTATTA GAAGAAAAAG AATGAAAGAA ATAGCCTTTG        2820

ACGCATTTTA CCAGCTTTAC CAAAACGACC AGCTTTCTTT AGTGGATGTG AGAGAAGTGG        2880

ATGAGTTTGC AGCTCTTCAT TTAGAAGGTG CCCACAACCT ACCGCTTAGT CAATTGGCTG        2940

ATAGTTATGA TTAATTGGAC AAAGATCGCT TGCATTATAT TATTTGCAAA TCTGGAATGA        3000

GATCGGCGCG TGCTTGCCAA TTCCTATTAG AACAAGGTTA TAATGTTATC AATGTCCAGG        3060

GTGGCATGTT AGCCTTTGAA GAACTTTAAA ATTTTGCATT TCTCCTACTT GGTGTGGACT        3120

GGGTAGGAGA GTTTTATTTT TAGATAATTC TTATTTTTAA GAAAATTGAA AACATTTAAT        3180

ATTTGCCTCG TGATGCTTTT TTCAGACTCC TAATCGTGGT ATACTAGGTC AGTATTTTAT        3240

AAATATGAAG GAGATTTTTA TGGCTAAAAA AGGTACCCTA ACAGGTTTGC TCCTGTTTGG        3300

AATATTTTTT GGTGCGGGGA ACTTGATTTT TCCGCCTTCT CTAGGTGCTC TATCTGGAGA        3360

ACATTTTCTT CCTGCCATCG CAGGTTTTGT CTTTTCAGGC GTTGGTATCG CCGTCTTGAC        3420

CCTTATTATT GGAACGCTAA ATCCTAAAGG ATATATCTAC GAGATTTCAA CGAAGATAGC        3480

GCCTTGGTTT GCGACTCTTT ACCTCTCAGT TCTTTACTTG TCAATCGGTC CATTCTTTGC        3540
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                                         1020
TACCCCACGT ACTGCTACAA CAGCTTACGA AGTAGGGATT AGCCCCCTTT TGTCGGATGC    3600

AAATAAAGGA CTTGGCTTGA TTGTATTTAC GGTTCTGTAT TTTGCGGCAG CCTATTTGAT    3660

TTCGCTTAAT CCATCAAAAA TCTTAGACCG CATTGGACGT ATTTTAACGC CAGTCTTTGC    3720

AATTTTGATT GTTATCTTGG TCGTTCTGGG AGCTATCAAA TATGGTGGAA CAAGTCCTCA    3780

AGCTGCTTCA CTGCTTATCA AGCTTCTGCC TTTGGTACAG GTTTCCTAGA AGGTTACAAT    3840

ACCTTGGACG CCCTTGCCTC AGTGGCCTTT AGCGTAATCG CAGTTCAAAC CTTGAAACAA    3900

CTTGGATTTT CAAGTAAGAA AGAATACATT TCAACTATTT GGGTTGTTGG TATCGTTGTT    3960

GCCCTTGCCT TCAGCGCTCT TTACATCGGT TTAGGTTTTC TTGGAAATCA TTTCCCAGTA    4020

CCAGCTGAAG CGATGAAGGG TGGAACACCA GGTGTTTACA TCTTGTCACA AGCCACTCAA    4080

GAAATCTTTG GCTCAACAGC TCAACTCTTC CTTGCAGCTA TGGTTACCGT AACCTGCTTC    4140

ACAACGACTG TTGGTTTGAT TGTGTCAACA GCTGAGTTCT TTAATGAGCG CTTCCCACAA    4200

ATCAGCTACA AGGTTTATGC GACAGCCTTT ACCTTGATTG GATTTGCTAT TGCCAATTTG    4260

GGTCTTGATG CGATTATC                                                 4278
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(2) INFORMATION FOR SEQ ID NO: 154:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1953 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

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ACCCGATCAA ATGACAAAAG CTAACTTTGG TGTCGTAGGT ATGGCCGTAA TGGGTCGTAA     60

CCTTGCCCTT AATATTGAAT CTCGTGGTTA CACAGTTGCT ATCTACAACC GTAGTAAAGA    120

AAAAACGGAA GATGTGATTG CTTGCCATCC TGAAAAGAAC TTTGTACCAA GCTATGACGT    180

TGAAAGTTTT GTAAACTCAA TCGAAAAACC TCGTCGTATC ATGCTGATGG TTCAAGCTGG    240

ACCTGGTACA GATGCTACTA TCCAAGCCCT TCTTCCACAC CTTGACAAGG GTGATATCTT    300

GATTGACGGA GGAAATACTT TCTACAAAGA TACCATCCGT CGTAATGAAG AATTGGCAAA    360

CTCTGGTATC AACTTTATCG GTACTGGGGT TTCTGGTGGT GAAAAAGGTG CCCTTGAAGG    420

TCCTTCTATC ATGCCTGGTG GACAAAAAGA AGCCTACGAA TTGGTTGCGG ATGTTCTTGA    480

AGAAATCTCA GCTAAAGCAC CAGAAGATGG CAAACCATGT GTGACTTACA TCGGTCCTGA    540

TGGAGCTGGT CACTATGTGA AAATGGTTCA CAATGGTATT GAGTACGGTG ATATGCAATT    600

GATCGCAGAA AGCTATGACT TGATGCAACA CTTGCTAGGC CTTTCTGCAG AAGATATGGC    660
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1021

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TGAAATCTTT ACTGAGTGGA ACAAGGGTGA ATTAGACAGC TACTTGATTG AAATCACAGC      720

TGATATCTTG AGCCGTAAAG ACGATGAAGG CCAAGATGGA CCAATCGTAG ACTACATCCT      780

TGATGCTGCA GGTAACAAGG GAACTGGTAA ATGGACTAGC CAATCATCTC TTGACCTTGG      840

TGTACCATTG TCACTGATTA CTGAGTCAGT GTTTGCACGC TACATTTCAA CTTACAAAGA      900

AGAACGTGTA CATGCTAGCA AGGTGCTTCC AAAACCAGCT GCCTTCAACT TTGAAGGAGA      960

CAAGGCTGAA TTGATTGAAA AGATCCGTCA AGCCCTTTAC TTCTCAAAAA TCATTTCATA     1020

CGCACAAGGA TTTGCTCAAT TGCGTGTAGC CTCTAAAGAA AACAACTGGA ACTTGCCATT     1080

TGCAGATATC GCATCTATCT GGCGTGATGG CTGTATCATC CGTTCTCGTT TCTTGCAAAA     1140

GATTACAGAT GCTTACAACC GCGATGCAGA TCTTGCCAAC CTTCTTTTGG ACGAGTACTT     1200

CTTGGATGTT ACTGCTAAGT ACCAACAAGC AGTACGTGAT ATCGTAGCTC TTGCGGTTCA     1260

AGCAGGTGTG CCAGTGCCAA CTTTCTCAGC AGCTATTACT TACTTTGATA GCTACCGTTC     1320

AGCTGACCTT CCAGCTAACT TGATCCAAGC ACAACGTGAC TACTTTGGTG CTCACACTTA     1380

CCAACGTAAA GACAAAGAAG GAACCTTCCA CTACTCTTGG TATGACGAAA AATAAGTAGG     1440

TCAGCCATGG GGAAACGGAT TTTATTACTT GAGAAAGAAC GAAATCTAGC TCATTTTTTA     1500

AGTTTGGAAC TCCAGAAAGA GCAGTATCGG GTTGATCTGG TAGAGGAGGG GCAAAAAGCC     1560

CTCTCCATGG CTCTTCAGAC AGACTATGAT TTGATGTTAT TGAACGTTAA TCTGGGAGAT     1620

ATGATGGCTC AGGATTTTGC AGAAAAATTG AGCCGAACTA AACCTGCCTC AGTCATCATG     1680

ATTTTAGATC ATTGGGAAGA CTTGCAAGAA GAGCTGGAAG TTGTTCAGCG TTTTTGCAGTT     1740

TCATACATCT ATAAGCCAGT CCTTATCGAA AATCTGGTAG CGCGTATTTC GGCGATCTTC     1800

CGAGGTCGGG ACTTCATTGA TCAACACTGC AGTCTGATGA AAGTTCCAAG GACCTACCGC     1860

AATCTTAGGA TAGATGTTGA ACATCACACG GTTTATCGTG GTGAAGAGAT GATTGCTCTG     1920

ACACGCCGTG AGTATGACCT TTTGGCGACA CGG                                   1953
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(2) INFORMATION FOR SEQ ID NO: 155:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6474 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

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CCGGCAGTAC ACGAGCTTGG GGAACAGCCA CTGGAACGAT GAGGTGTGAG CTCAAAATAT       60
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                                    1022
CCTCCAGTTA TGTTTTTCCT AATAGTATAC CGGAAGAGTG AAAGGATTTT ATAATGGAGC    120

GGTTACAAAG AACCTACTTT CTATTAAACA GTATACTATG AAAATGTGAA AATTTAACAT    180

TTTTTTGTAC AAATTTTATA AATTATTGCC TTTTTAATAT CAATAGTTAA TCTCTTATCC    240

AGATCCCCCT TGTGTAAACT TTATCTTTAT AAGCTTCAAG GCCCCTATCC CATCTATTTG    300

CAACAATTAG ATCACTTTGT TTTGTAAATA GTTCAAAATT CTTTTCAATA ATTACGTTAT    360

CTATACTAAC GTTTAAATTT GGTTCATATA CTAAAATTTT TATACCGACA ATCAATAGTT    420

CATTAATTAT ACTTAAAATA GCTGACTCTT TGTAATTATC TGAATTATAT TTCATCCCCA    480

ATTTATATAT TCCTACTATC TTTGGCTTTC GTTCCAATAT TTGTTTAACT ATGAACTGTT    540

TTCTATTTGT GTTTGAAATA TCAATCGCTT CTATCACTGG GGCATTTATT TCTATAAATT    600

CTTTTTTTAA TTGTTTAGTA TCTTTGGGAA GACAATATCC TCCAAATCCA AAAGAAGGAT    660

TATTATAAAA ATTTCCAATT CTTGGATCTA AACAAACACC TTTTATTACA ACTTCAGCAT    720

TTAAGCTTCT CCTCTCAGCA AAAGAATCTA GTTCATTAAA AAAGCAACAC GGAGAGCTAA    780

GAATGTGTTA GAAAAAAGCT TAATTGCTTC TGCTTCAGTA GGAGAAACTA ACATAACATT    840

TTTAATATTG GCAGTACTAT GAGTACTAAT CGAAAGGAAC AACTCTGCAA TTTTTCTTCC    900

TTCAACTGTC TCATCTCCAA CAACTATGCG ACTTGGATAT AAATTATCAT ATATAGAACA    960

ACCTTCTCTC AAAAATTCAG GGACAAAAAT GATATTTTTT GTATCAAACA GCCTTTTTAA   1020

TTTGTTTGAA AAGCCGATCG GAACTGTTGA CTTTAAAATA ATCTTTCCAT TAGGTTTTAC   1080

CCTCAGAATC TTCGATACCG TTTGTTCGAT TTCATATGTA TTAAAACTAC CAATTTTCTC   1140

ATCATAATCT GTCGGAAGCG CAATAATATA ATAATCAATA TTATTTTTAA TTTCAGAAAA   1200

TGTATCAAAA AAAGTAATAT TTAAGTTATT CTCGCAAAAA AACTTCATAA GCTCTTCATT   1260

TTTAGATGGA AGAATGCCCT TTTTTAAATT ATTTATTTTT ACAGAATCTA TATCATATGC   1320

AACAACTTTA TATTTAGATG CAAATAGTAA CGCGTAGGCC AGCCCAACAT GCCCCAAACC   1380

AATTACTGCT ATATTCATAA AACTACTTCC TTATTTCTTA ATCCAAAATC TAATAGAATA   1440

AGCTGCCCCA TTCCTTAAAT ACAACTCTTT AATATTGTTT AAAAGTTTTT CAACTGATTT   1500

CCAGATTATC AAAATCTGAG ATTTATAGCA CAATATTGAT GATATTCTAT CAATATAATT   1560

TTTTTCATCA AGTTCCTCTT GATACATTTT TAATTCTTTA GTTTTTCCCA TATAACTAAC   1620

CATACTACTA TCACTTACAT ATGGGAAGTC CTCATAATAT ATTACTTTAT AACGCATAAA   1680

TTCAAGCGCC CTTCCAATAC TATTCACAAA AACATGAGCA ACATGGTCAC CAAGTGAAAG   1740

CGGACAATAT ACGACACATT TGTCGTCTAA ATGCATTAAC AGCTCTTTTA TGATATCATT   1800

CTTTAATGTG TCCTCATTTT TTAATTCACT ATAGATATGA CGGTATAGAA AATTGCCATT   1860
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1023

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TCTATCTTTC CTATAGAGAC ATTCATAGTA CGATAAGTGT CTAAAATCAC ATTGTAGACG    1920

TTCACAAGCT AACCTGTCTT CTTTCTTCCT TTCTTCAATC GGATATTTCC CAAGGTTACA    1980

CAACTTATGA AATTGCTTAG CAGAGGGCTG TAGCTGTTGG CTCAAAGGGT AACCAGAAAA    2040

TATAGTAATA ACAAGTACAA TTTCTCCTTC TGAAGTTAAT TTTGAAATAT AATCACCACA    2100

GGAAAAAATT GCGTCATCTA AATGTGGAGA TAAAAAGATA TACTTAGTAT TGTTACTCAT    2160

AACCATTCCC TCTACAATTT ATCTAAAAAC TCACTAAGTG TCTGATTAAA TTCCACATCA    2220

TCAAAAAAAT TCACCTTATT CTTAATAATG AATATTTCGT TAAATAAACA TATATATAAA    2280

TATTTCAATA TCCTTTCAAT ATCATCCTCT AAATTCTCCT CAATATTTTG TATCAGCCCA    2340

TTTACAATCT TATTAAAAAA GATAAGCTCT TTATCTCTAA AATTAAATAT TTTCATACAA    2400

CTGTTGTATC GAAAAATATA TAAAATAATT TTTACTAATG TTTGAATATT TAAACAACTA    2460

AATAAATGAG TTGTACCCGG GACACTATTT ATGTTATCAA GAACACTATC TTGAAACCTC    2520

AACTCACAGT TCTTTTTGTG AAATTCTTTT TTATCGTTTA GATCTGATAT TTTTTTAGAC    2580

ATTTCAACAA TCTCAGACAT TTTATATGGA TATCTAGGAT GAATGCCAAA ACTATGCAAA    2640

ATGAACTGCA CCCCAAAAGT TAGACAGAAT AAATCTAACT TTTGGGGTGC AGTTCATAAG    2700

ATTGGGATAT TTTTTTTTAG CTAGAACTAG TAGAAATATA TAGTCAAATA ACAGATACCT    2760

TAAGGGTTTC TCATCTACAT AAAAAAATGA TACTTTTTTC TCTTCAGTAA TTACCTCATA    2820

AGCTTCACAA TAGAATCTCA TGTTTCCCTC CCCTATATTC TTAAATAAAA TCCTTTGGAA    2880

ATTGATATAT CTTAGTAAAA TATTGTTTAA GTTCCGGATG CGGAGCATGG GTAACAATAA    2940

TGACAGTCAA ATCCTCTCTA TCTAATATCT TACGTTCAAT CGCTAACGAA GTTCTCCTAT    3000

CGATAGCAGA AGTTCCCTCG TCAATTAATA CTATTTTCTT ATTTCTAATT AGCCCTCTAG    3060

CTAAAGTAAT TTTTTGTTTC TGCCCTCCTG ACAGTAATCT CCCATCATCA CCAACATAAT    3120

AATCTAAAAT GTTATTAGGA AAATCTTTTA CACTCAAACC AACTTGCTCT AAAGACTGTA    3180

GTATTTCTTC ATCAGTATAA TTTTCTTCCA ATAAAATATT ATCTCTAATC GTACCTTCAA    3240

ACAAATAAGC TTTTTGATCT ACATATAGAA CATTCGAAAC CATATTTAAA TAGGAGGTTT    3300

TTTTTATATC ATCCCCGCAG AATCGCAATT CTCCACTATA ATCTCTCAAA AAGCCATTCA    3360

ATAATTTTAA TAATGTAGAT TTCCCGCTTC CACTTTCACC TAAAATTAAA TACTTTTCAT    3420

TACGTTGAAA ACAAAAATTT AAGTTTTTTA ATATTTCTTT ATCTCCATAC TTATAGCAAA    3480

TATTTTTTGC TTCATATAAC GGAAAATCTC TATTCACCTC ATTTGGTTCG ATATCATTCA    3540

TTTTATTTGA CTCAATTGGA TTAATTGAAT ACAATTTTAA AAAAATAGGC TTCGTACCAA    3600
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                                    1024
TAATAGAGGA TAATTGACCT CCTAATTCAC CTAGCGCTGT AAAAATAACA CCTGTTAGTG    3660

CTCCTATTGC TTCAATAGTA CCAATTTTCA CTATTCCTTT TATTGCAAGA TAGCCTGTTA    3720

AAAAAACGAG AGATATCTGA AAAAAAATAT TGAGAAAGAA GCTAATAGCG CCTGCTAACG    3780

TTTCTACAGT TGTCTTTCTT TGTATAACCA TCTTTAATAA AATTCCTGCT TCTTTAATTT    3840

TCTTAGGCAA TACATATAAA AGATTCAAGG ACGCTAACAC ATCAAATCCA TTCAATATAG    3900

TCTCACTAGA TTTTAAAAAA GCTTCATTTT GGTTAGTTAA ATTTAGACTA ACTTCTCGCA    3960

TTTTCGATGC AAAGATTTTT GGTACAAGTA GCATAATCAT TAATGAAAAC AAGGTGGCTA    4020

CAGTCAATGA CCAATGATAG TGATTAAGAG TCACAACTGC AAATATAGTA CCAGAAATTC    4080

CTTTTATTAC TAAAAAAAGT TGTTTAAACG CCTGATCATT TAAAGTCTGA ACATCATTAT    4140

TTAGCCACGA AAGATATGTT CCTGATGATT TACTATGAAA TTCTTGATAG GTAGAGTTAG    4200

AGATGTCTGT GGCAACTCTA TTTCGAATCT CTAGATTAAA CTCTTGGATC ACTTCAACCT    4260

GATAATTTTT CACTACCCAG TCAAGGAATA TTATCCCACA CCAGACAATC ATTTGGTAGA    4320

TTGACAATTT CAAAAACCGC TCTAAATTCA TCGCAATTAA TTCATTCAAC ACCAGAGCAT    4380

TAATAGTTGC TGCATAAATT AGCAATAATT GACCAGCAAC AATAAATATC GTTAATAAAC    4440

TAAATTTTTT TATATTTGAT TTTATAATAG TATACACAAT AGTTTCTCAC TTTCTAAATT    4500

TTAATTGAAC ATAGTTTTCA TATATACAAT AGAAAAAACC AAAATGATAT AATAACATAT    4560

ATTTCAAAAA AGAAATTCGT TAAAAATTTT TTCTTCTCTT GCCTTCTTGA TTACTTTTAA    4620

AGCCTTGCAT TTGTCTCCTA TTAATAGTAA CCGCTTTATG TTTAAAGAAT AATATTTCTT    4680

TGTAACCAAT ATTCTCTCGT TGAAACTCAA TAAATTAAAA TATTTCCTAC AGTAATTATA    4740

ATATTCTTCA TCTGCATTAA TTGTTTTTTG TGTCACTCCA GTGATACCGT TTTCTTTACT    4800

GTGAGCGTAG TAATTCACCA AGAATTCTCG CACTATATCA ATTTGGTATC CTTGAACAAG    4860

TAGTTTTAAT AAAACAACAC CGTCCTGATG TGAATCTATT TTCTCAAAAC CATTAATTAA    4920

TTCTAGCACC TCTTTTTTAC ACAACCAAAA TGACGTACCT GCTATATTGT GAACCATTTG    4980

AACAAACAAG GGATTTCCAA CAAAATCGGT CTTCTCCTCT TCTCGTGTAC CATTTGGATA    5040

AATTATTATT CCATAACTAC AAACTAAAGC TAAATTCTTC ATTCTACTCT TTTTAAAACA    5100

AGCCATCAAC TTTAAAATTC GATCTGGCAT ATATTCATCA TCATCGTCTA AAAATGATAT    5160

ATACTTACCT CTAGAATTTT TGATACCTAT GTTTCTGGCA TTAGTTGCAC CTAAATCTTC    5220

ATTACTTAAA ATTAACTTAA TTCTATGATT GGTATAGCCA AATTGATGGA TAATTTTATT    5280

TCTTAAATTT ACATTACTAT AATTATCATC AATAATTATA ACTTCGATAT TTTTATAACT    5340

TTGATGTAAA CAACTTTTCA CAGCTCTAAT CAGAGATTCA TACCTATTAT GTGTTGGTAT    5400
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1025

TATAATACTT ACTAATTCTT GATCTATATT CCTATCCATG ACTACTCTTC TCTAATAATT   5460

CATCATATAC TCTCATGGTT TCTACAAACA TTTTTTGCAC AGAAAAATGT TTTCTTATTT   5520

TTGATTTACT ATTCTCACCT ATATATTTCA AATACTCAGA ATCATTGAGT AAAAAATTAG   5580

CACAAGCACA CACTCCCTCA ACATCTTCCT TCTCAAATAA AAATCCATCA ACCCTATGTT   5640

CAATAATTTC ACTTAACCCG CCAACATTAC TAGCTAAAAC CGGAGTTCCT TGTGACATTG   5700

ACTCTAAAAC ACACATAGGT ATTCCTTCTG TATCAGAAGG AATATACAAT AAATCCGATA   5760

TTTGGTAAAC TATAGTAGCT GGATAGATTT CACCAAGTAA CCTGAAATTA TCTCTACATT   5820

TCAAATGGCA AATTTTTTCT TTCAAAGCAG CCCACATACT ACCATTTCCA GCCATAATAA   5880

AAATCACATC TTCTCTGACT AAAAATAATT TTTCTGCAAA TTCAAGGAAT CTATCCGGCC   5940

TTTTTTCTGG ATCCAACCTT CCAACATAAC AAATGATTTT TTGTTATTTG GAATACAAAA   6000

TTCTTTTTTA AAGTCTTGAA CACCTACTAC ATCTAAATCG CTATTTGATA CATTAATTCC   6060

GTTATTTATT GCAACTATCT TCTTATTTTT TATTATACTC TCCAATCTTT TTTTTCATAG   6120

TTTCAGATAC ACAAATAAAA GCATCTCCCA TAGAATATGT CCAAAAATCA AAATAAGTCA   6180

AGAATTTCTT TTTTAAGTTA TATTCAACCC ATCCATGGCA TGTTATCACT GTCTTAACCT   6240

TTCCAAATCC ATTCTTGTCA AGTTTTTTTA ACATATATAA AAAATAATTA GTTGAGTAGC   6300

CATGACAGTG TATAAGTTGG ATTTTTAATA ATTTTAAAAT ATTTTTAACG TGTAAGGCAG   6360

TTTCAAAATT ATTTGAACAT TGAGTACAAT CAACATAGGC AATATCTAAA TTTTTATAAT   6420

CATCAATAAC CTTTGAATCT CTAGATACAA TTATCAAAAT AGGGAATAGA GACA   6474

(2) INFORMATION FOR SEQ ID NO: 156:

      (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 4792 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

TATTTAACGA TTTTTTTCAT GTCATTTCCT CCAAAATAGA ATACCTTATA ATCTTAACAG   60

AAAAAGAGCA TTTACGCCAT TATATGATAT CTATCTCTGT GATAAGTTTT TTTTATGGGT   120

AATTTAAAAG ACCAAACGCA AGATGGCAAT CAAGACCACT CCAAAGAGAA CTGTTCCGAC   180

TAGATTGCGG TAGCGAAAGG CTACCCAAGC TGTTGGAAAG ACGGCTAAGA AGTCCAGTCA   240

TTTGATTTGA GGAAGACTGC CAACCTTACC TGTCACTACG CTTGAAAGAA TCAGGGCAAA   300

1026

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GATAATGGAA ACAGGCAAAA ACTTCAAAAA ACGCTCAACA ATCGCAGGCA GGCCCTTATA    360

CTTGACCAAG ATGAAGGGAA TCATACGGGG AATCCAAGTC ACCAAGCCAG AGAAAATAAC    420

TGCTAATAAA AGATACTTAC TGACCATCTA AAACCACCCC CATGCTACAA CCAAGTAGCG    480

TCGCAAACAG AACAGCTAGT GACTGAGACA TCACTGTCAA GAGCAAAAAG AAGGACACCG    540

CAACAACTGC TAGGATAATG AGCAGATTGC GGACAGGAAT CCGTCTTTGC ATAATCTGAA    600

ATTGCGAAGC AAAATACCAA TAAACATCCC AACCAGGGCA AAATCCAAGC CAAAGATTTC    660

TGGATTTGGT AGCAGGCCAC CCAGAGCCGT TCCGACTACT GTCCCCACAA ACCAAGCCAC    720

ATAGCTGTTA AGATTGTTTC CGTGCATCCA CATAGGATTT ACCTTGTCTG TATGGGCCAA    780

TTCACCCATC AAAACGCCAT AGGTCTCATC TGTCAAGATA CTAGACATAC CGATATTGTA    840

CCAAAGACTG GTATGACGGA AATAAGTCGA TGCGTGTAAA CTCAACAAAA AGAGACGCAA    900

GTTGATTAGA AAAACCGTCA TAGCAATAGC TGCCACAGGA GCTTGAACCA CAATCAGTGC    960

CAACATGGCA AACTGGGCAC TCCCAGCATA AACAAAGAGA CTCATCAAGC CCATCTCAAC    1020

AGGTGTCACA TAGGGCGCAC CGATAATTCC ACAGGCCAGG CCGATACTGA CATAGCCAAG    1080

AGCCGTTGGC ATGGCTGCCT GCGCCCCCTC CTAAAATCCT TTTTCTTTCA TCTTTCTCCT    1140

CATATTGTCT TAATAATACT CAATGAAAAT CAAAGAGCAA ACTAGGAAAC TAGCCGCAGG    1200

TTGCTCAAAA CACTGTTTTG AGGTTGCAGA TAGAACTGAT GAAGTCAGCT CAAAACACTG    1260

TTTTGAGGTT GTGGATAGAA CTGACGAAGT CAGCTCAAAA CACCGTTTTG AGGTTGTGGA    1320

TAGAACTGAC GAAGTCAGTA ACCATACCTA CGGCAAAGTG AAGCTGACGT GGTTTGAAGA    1380

GAGTTTCGAA GAGTACAAGT AGGCTGAAAA GAATCCAACC ACAGCATGGA CTATTATATA    1440

GCAGATTGAA ATAAGATGAG AACAAATCGA TTGGGAAAGT AAAATTAATT TCTATAAATG    1500

TTTTAGCAAT TGTTTCGTAC TATTTTAGAT TCAGTCTATT ATAACACATT CAGAAAAGAG    1560

AAAAAAGTCT GTTGATTTTG ACCATCATAA AAAGACTGGC AATCCAGTCT CAAACATATA    1620

TTATAGAAAT TCTCCACTAA ATACTTTCAC GAATATTCAG AAGCATAACA AAGGCAACTA    1680

GAAGAAATAG CAATAAAACA AAGCTAACTG CCAGAGTTCC AAAGCTAGTA GCAATGGTTA    1740

CCAAAGCTAT TGTAAATAAG CTAGGTAAAA CAACCGTAAT GGCACCGATA GAGGATTGAA    1800

CTGCTCCCAT TGACTCCTCA GGTATTTGTT TAAAAACGAG TTCTTGCAAT CTAGGAGAGA    1860

GAACACCTGC GAAAAAGGCA TCCAAGGTAC TAAAGATGAG AATCCAGTCA AAACGAACTG    1920

TGGCAAATCC TACTAGAAGA AGCAACTGGA TGACAAGTGA GGCATAGAGA GCTGTTTTTA    1980

TGGAAATGGT ATGTTGCAGA TAGCCACTTA CAAGGCTTCC GACAATCAGG GCTGATAATT    2040

CTAGTGTGGC TAACAAGGCA AGAGATTGAC CAGTTTGTAA ATTCAAAAAG GGCTGGTTCC    2100
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1027

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TTAAAAATAG AGTGGAAATA GGAACCGTAA CATTTATCAC TGCTTGACTA GTAGAGATAA    2160

TAAACAAAAC CAAGAGCACC TTATTCATAT TCCATATCAA TTTCGATGAT TGGAGCAAAT    2220

GCTGGCAAAA GGATTTTACA GAGAGTCCTT CTTGATAGCT AATCGTTTTT TCTACTTTCA    2280

AGAGGTCAGT TTTTATGAAG AGGATACCTA AAAATGCGAT TAAAAAGGTA AGAGCGTTCA    2340

GTAAGGAAAT AAACTGGATG GATAGAATGC CTAGTAAGAC TCCTCCTAGG ATATTACTGA    2400

TTGTTTTCAC TAAACTAACA GTTGACTGTT TAAAGCCAAT AGCTTCTGCC AGATGGTCTT    2460

GCCCAATAAT TCTAATGAAA ATCGGAGTGA GCATGGCGCC TGAAAAATAA CTCAATGTGT    2520

CAGACAAGAG GTTAATCAGA CAAATAAATG CTACTAGCAA CAAGGAGAAA GACTGCCCTG    2580

AAAGTGATAA AGACACTATA GAGTAAAGCA AAAATTTTGC AAAACTAATG ACTGTGTATT    2640

TCAAGACACG ATGATGTTGA AAATCCGCCA AAACTCCCAG AAAGATTTGT AGAACTTGGG    2700

GCAGGGTTTC TGAAATCGTG ATGAGTAAAA TCGCCAAAGG GGCAAAAGAT GCATCTGCCA    2760

CATAATTCAG GAAGGCCAGA TAAAAAATCG TATCCCCAAG CGTTGAAATC CACTGGTTGA    2820

TAGTTAATTG CCTAAAATCT CTATTTTGAA GAAATACTTT CATCACAACT CCTTCTTAAG    2880

TTCAAATGGG AATCTTTCCC CAAGGATAGA CCGCGATACT ACTAACAACC AAAATTACAG    2940

TAACATCAAA AGCTGACCAA TGCCATTGTA GACTATATGC AGTCCAATAG GCCAATAAAT    3000

TGACTTTGTC ATTCTAAATA AGACTGCAAA TATAAGACCT CCACCCATAT AGAAGACAAA    3060

GTCTGTCAAG ACCCAACCGT GATTACTAAT GTGCGAGACC CCAAATAAAA CAGCGGAACC    3120

AAGTACATCT AGCCCCCATT TCTTTCCTTT TTCCAGAGCA GTCATCACTA ATCCACGATA    3180

AATCATGTCT TCAAAAATGG GACCTGCAAT CACAGGATAA AAAAAATACA TCAAAAATGC    3240

TGTAGCCCCT GTAAAAGTCG GAGCAGCATG TTGATAAGAA ATTTCATTTC GAGTAGGTGG    3300

GAAAAGAAAA AAGGTAACGA AATTCCAAAC AACAAAAGCA AGCAGAGCTA GGAAGGAATA    3360

GAAAAGATAG GATCCTTTAA ACTTTCTACT ATTGATTTTC TGCCATTTCC CCGACCAAAT    3420

CATAGCAATA AGAGCAAATA AAACCACAAG AAAATTCAAC ATCATATCCG ACAGATAATA    3480

GGCAAAGTCA GATAGCCCAG TAACAAGGTC GCTGCGTAAA ACTAGAACAC TGAACTTCTG    3540

GTCAGCAATA ACTAGTAGAA AAACTATAAT AAAGTAGCGG TGTGAGATTA TCTTTTTTCAT    3600

ATATCACCTT TCTAATATCC AAATACCAAT AAAGTAACAA TGAGTAAGAA ACTATTCCAT    3660

GAAGCATGCA GAGCTATAGC CCAATAGATG GATCGGGTGT AGCGAAACAT CATACAAAAT    3720

ATCAAGCCCA TTCCAAAATA CTTTATGAAA TCTGTCGTTA TCCAACCATA CTGCAAAACA    3780

TGCATAGCGC CAAATATGGC AGCGGAAACA AGAACATCAA GATAGTATCT CTTAACTTTA    3840
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1028

GATAAACTTG	TCATCAAAAG	ACCACGACAA	ACAACCTCTT	CTGATACAGG	TGCGATAATA	3900
CTAGTATAAA	GTATTCGCGT	AACAAAATAG	CTAATTCCTG	TTAAATTGGT	GGCTACTTCT	3960
ACGACTGTAC	TTCCATTCTG	GGTACGAGGA	AAGATATAGG	TTGTTAGATT	TGCCCACACG	4020
AACAATAAGA	AAAAGAAAG	AAGGAAAACA	CCCAGGTAAG	ACCAACGAAA	CTGGAAACGA	4080
CCACACTCTT	TCCAATGTTC	ACTTTTGACA	AAAGCAATTG	TAGCTATAGT	TCCCAGAATA	4140
AGTACCAATA	AAACTTGGAA	CACATAGTAC	ATATTATCAG	ACAAAGCAAC	CATAAAATCT	4200
AAGTCTGATG	TGACATTAAA	AATGAGGTAA	TAAGTCAAAA	TCAACAAGCC	AGTTGCTAGG	4260
TGAAATTTCA	CTTCTTTCAT	TTTCTTCATC	CTATTATCTC	CTATAAGAGC	CTATCTTCTA	4320
CGGCGGCCAA	ACAATCCATC	TGCTAAATCT	ATAGTCCAAT	CAAAAGCTCC	ACGATTAGGA	4380
CTCATCCCTT	GATTGCCCCA	ACCAGGGTAA	ATTCCTGGGA	CGCCCCAACC	AGATATACCA	4440
CTTCTTCCAC	CACCTCCCAT	AGAATTTACG	AGGTTGCCTC	CTCTAACATC	TTGCAACTCA	4500
GCTTCTGTCA	ATTCCATTGT	TTCTGCAAAT	TGTAAATTTA	ACATCTTTTA	CACTCCTTCA	4560
ATTATCTTCA	TTTGTAAACC	ACTTCTGCGA	CCTAGGATTT	GCTTCAAGTG	CTTTACAAGT	4620
ACAGTATAAC	ACGAACATTG	GCTTATTTTA	GAAAATCGCA	TATTTGATAT	TTTTTCTTAT	4680
AGAAATTTCA	GATTTGCGAT	TTTGGTGAAT	TTGATTACTT	CTCTGGTATA	ATAAAGTTAC	4740
TACTAATGAG	GAGTGGAGAA	ATATGAAGAA	ACAAATTTTA	ACATTATTGA	AA	4792

(2) INFORMATION FOR SEQ ID NO: 157:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2156 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

CCGTTCTCGG	CGACGGCCAT	CTGATGAAGC	TATTTATGAG	GGAAACTGGC	AAGCTGGAGA	60
GTCAGAGTAT	CTAGTCTTTC	ACCGATTGCT	GTGGCAGCAG	ATGTGCAGGG	AAAAGGAGTT	120
GCTCAAACCT	TCTTAGAGGG	CTTGATTGAA	GGTTTTGATT	ATCTTGATTT	TCGCTCAGAT	180
ACGCATGCTG	AAAACAAGGT	TATGCAACAT	ATTTTTGAAA	AACTTGGTTT	TAAACAAGTC	240
GGTAAGATGC	CAGTAGATGG	CGAACGCTTG	GCCTATCAAG	AATTAAAGAA	ATAATGCAAA	300
AGAAGTATGT	AAAAATCCTC	TACTCCTCAC	CAATTGGTAT	TCTATCACTT	GTAGCTGATG	360
ACCATTATTT	GTATGGAATT	TGGGTTCAGG	AGCAGAAGCA	TTTTGAGAGG	GGACTAGGAG	420
ATGAAACGAT	AGAAGAAGTT	GTTAGTCATC	CTATTTTAGA	CCCAGTTATT	GCTTGCTTAG	480

1029

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ATGATTACTT TAAAGGCAAG CCTCAGGATT TATCCAACTT GCTCTTGGCG CCAATCGGAA        540

CGAATTTTGA AAAGAGAGTT TGGGACTATT TACAGGGCAT TCCTTATGGT CAGACAGTGA        600

CCTATGGACA AATTGCTCAA GACCTGCAAG TGGCTTCTGC TCAAGCAATT GGTGGAGCAG        660

TGGGACGCAA TCCTTGGTCT ATCCTAGTAC CTTGTCATCG TGTGTTGGGA GCAGGCAAGC        720

GTCTGACAGG TTATGCTGCA GGAGTGGAAA AGAAAGCTTG GCTCTTGGAG CATGAAGGAG        780

TAGATTTTAA AGATAGAAGC AATAGAAGGA GAAGCACATG TTAGAATTTA TCGAATACCC        840

CAAATGTTCA ACTTGTAAAA AAGCAAAACA AGAATTAAAT CAATTAGGTG TGGACTATAA        900

AGCCGTCCAT ATCGTGGAAG AAACACCTAG CCAAGAAGTC ATTTTGAATT GGCTAGAAAC        960

CTCAGGATTT GAATTGAAGC AATTTTTCAA CACCAGTGGT ATCAAATACC GTGAATTAGG       1020

GCTAAAAGAT AAGGTAGGAA GTTTGTCAAA CCAAGAAGCG GCTGAGTTGC TAGCAAGTGA       1080

CGGTATGTTG TTAAAACGGC CCATTTTAGT AGAAAATGGA ACTGTTAAGC AAATCGGTTA       1140

TCGAAAATCT TATGAGGAAC TGGGACTGAA ATAGTTTTTA TCTATCTCTT TGATAGATAA       1200

AATATATAAC TTCCCTGTTT CAAAGTATGA TAAACTAGTA GGTAGACAAA GTCTGTATCT       1260

GACCGTAGCA AATAATTTCA TTGACGGCAG AAGCATGGTA GCATGAATCA TTATCAGAAG       1320

AGGATGTTTT TATGAATGTT ACAACGATTT TAGCATCAGA TTGGTACCAA AACTTGATGC       1380

AATTGATTCC GGATGGCAAG CTGTTTAGCC TACGTTCGGT CTTTGATGGA ATCCCTAGAA       1440

TTGTCCAACA ACTTCCAACA ACAATTATGT TGACAATTGG TGGTGCCCTT TTTGGCTTGG       1500

TTTTGGCGCT TCTTTTTGCC ATTGTGAAGA TCAATCGTGT CAAGATTTTA TATCCCTTGC       1560

AGGCCTTCTT TGTTAGTTTC TTAAAAGGGA CACCGATTTT GGTGCAACTC ATGTTGACCT       1620

ACTACGGAAT CCCTTTGGCT TTGAAAGCCC TCAATCAGCA ATGGGGAACT GGTCTCAATA       1680

TCAATGCGAT TCCAGCTGCA GCTTTTGCGA TTGTCGCCTT TGCCTTTAAT GAGGCAGCTT       1740

ATGCTAGTGA AACCATTCGT GCAGCCATTC TCTCAGTTAA TCCTGGTGAG ATTGAGGCGG       1800

CACGCAGTCT GGGTATGACC CGAGCGCAAG TTTATCGACG AGTGATTATT CCTAATGCAG       1860

CGGTGGTAGC TACTCCAACC TTGATTAATT CCCTCATCGG TTTGACCAAG GGAACATCTC       1920

TAGCTTTTAG TGCGGGTGTT GTGGAAGTCT TTGCCCAAGC TCAGATTCTA GGTGGAGCTG       1980

ATTATCGCTA TTTTGAACGC TTCATCTCCG TTGCCCTTGT TTATTGGGTA GTCAATATCG       2040

GAATTGAAAG CCTCGGTCGT TTCATCGAGA GAAAAATGGC TATTTCTGCA CCTGATACAG       2100

TGCAACAGAT GTGAAAGGAG ACCTTCGTTA ATGATTAAGA TTTCGAATTT AAGCAA         2156
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(2) INFORMATION FOR SEQ ID NO: 158:

1030
(i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3140 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

GTATCTCTAC ACATGTCTTC AATCGATTTT GTTGTCCTCC AATTTAATTC CTTATATGCT   60

TTGTCTGCAT TTGCATAACA AGTTGCAACG TCTCCTGAAC GTCTTGGAAC TATTTTATAA   120

GGAATAGGGA TCTTATTAAC ACTTTCAAAT GTATTTACAA GTTGTAATAC ACTAGTGCCT   180

TCTCCCGAGC CTAGGTTATA GATATAAACA TCTGTTTTTT CAGATACTTT TTCTAAAGCT   240

TTTATATGTC CTATTGCTAA ATCTACTACA TGGATATAAT CACGCACACC AGTACCATCA   300

AGCGTATCAT AATCATTTCC GAACACACTT AGCTCTGATA GCTTACCTAC CGCTACTTGT   360

GCAATATAAG GCATCAAGTT GTTAGGAATT CCTGAGGGAT CTTCCCCAAT CAAACCAGAC   420

TCATGAGCAC CAATTGGATT GAAATAACGA AGCAACGCAA TACTCCATTC TGAATCTGCC   480

ACATGAACAT CTTTTAAAAT TTGCTCAAGC ATCACTTTCG TATACCCATA AGGATTTGTC   540

GCACTTGTTT GCATCGTCTC AATTAGAGGT GACTGATTGT TAATTCCATA TACAGTCGCA   600

CTTGAAGAAA AGACAATCTT TTTAACATTA AATTCTGACA TCACTTCAAC AAGTGCCAAT   660

GTACTCATAA TATTATTTTT GTAGTACATC ACAGGCTTTT GCACGGATTC TCCGACAGCT   720

TTATAACCTG CAAAATGAAT TGCAGCATCA ATCGATTCTT GTTCAAATAC CTTTCTCAAT   780

GCTTGTTTAT CACAAACATC TAATTCGTAA AACACGGGAC GTATTCCTGT AATTGCTTCA   840

ATACGGTCTA GCACCAAGAT GCTAGAGTTC GAAAGGTTGT CGACAATGAT AACTTCCTTT   900

CCTAAATTTA GTAATTCTAC TACGGTATGG CTACCAATAT AACCAGCTCC GCCTGTTACC   960

AATATTGCCA TCTGGGTTTC CTCCTAATTA ATTCCAACCG ACTTAACAAA TCTCATAAAC   1020

GCTTCATGCC CAGACGGTGT ATTCTTATAA ACTCCTGCAT CTTCCAGAAC TCTCGCAAAC   1080

ACTTGTCCTG CTTCGTGTTG AACTACGCTA TTAACCTCTT CTTTATTAAT GCGAGGATAT   1140

TTTTCTTTCA ATTGGTCGGC CCATTCTAAA TGATAATCCG CAATTGCATT ATCCTCTCCT   1200

AAAAGATATT TTCCAACTTC TTCTAACTCT GGTTTCAAAC GAGGTGGTAA TATCGCAAGT   1260

CCCATCACTT CGATTAACCC GATATTTTCC TTTTTAATAT GTTGTACATC TTGATGAGGA   1320

TGGAAAACAC CATCTGGGTA TTGTTCAGTA GTATGATTAT CTCTTAGAAC AATATCTAAT   1380

TCGTATCTCC CGTCCACTTT ACGAGCAATA GGAGTCACCG TATGGTGTGG GACATCTTCA   1440

GTCATAGCAA TGATGTCTAC TTCTAAATCT GAATATTCTC TCCACTTATT TAGAATTTTA   1500

1031

GTAGCTAAAT CTAACAAGCG ATTTTTATTT TCACTTTGTA ACCTAATTAC TGACATTGGC   1560

CATTTTACAA TACCAGCATT AACATCCTCA AAGTCTTTAA AACAAAATTC ACTCTCAAAT   1620

TTTGCTTTTT CCATTGGGAA AATATGTTTC CCTCCCTGGT AGTGGTTATG ACTAAGAATG   1680

GAGCCTCCTG AGATAGGAAG ATCAGAATTT GAACCAGCAA AATATCCTGG CAAAATATCA   1740

ACAATCTCCA ATAATTGTTC AAATGTTTTA GAGGTAATAG CCATTGGTAC ATGTTGACTA   1800

TTCAAAAATA TCGCATGCTC ATTAAAGTAT GAGTAGGGAG AATACTGGAA TCCCCATACT   1860

TCGTCACCAA GTTTCAACCG AATAATTCTA TGATTCGAAC GTGCTGGATA ATTTATTCGC   1920

CCCTGATATC CTTCATTTTC CATACATAGT AAACATTTGG GATAATTAGT TGCTTTTACT   1980

AATTTTTCAG CAGCAATTGT TTTTGGATCT TTTTCGGGTT TTGACAAATT TATCGTAATC   2040

TCTAGCTCTC CGTATTTAGT TGATGCTCGA AACTCAATAT TCTTAGCAAT AGCAGAAGTT   2100

TTAATATAAT CACTATCTTT ACTTAACTTA TAAAACTCTT CAACTGCTTC TTGAGGTGAT   2160

ATATCATATG AACTCCAAAA AATATCATTT AATCGACTAG GTAAAGGAAC TATGAAATTC   2220

ATTAACTCTG CTCCTAAACA TTCCTTTTCC TCGATTAAAT CTTTAATTTT ACCGTTTTTT   2280

AAGGCGATTT CCACTAAGTA ATCTTTTATT TGTTTCAGGT CATTTTCATC GGAAATGCGA   2340

TCAATTCCCT CCTCACCTAT TAACGCTAGT ACTCTATTTT TCACATATAT TTTGTCAATT   2400

TCATTATACA TTCCGTATTC AATTACTCTA TCAACAAAAT TATCAATAAT TGTTTTCATA   2460

TATTTTTCTT TCTAATTTAT GTTCCCATAT TTTCTATACA TTATCCATTT ATAAATTGCT   2520

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GAAACGTTCC CATCATCTTC AAAATATGTAA TTCATTATTT TCTTTTCCAT ATTTATACTA   2640

AGCTCTTCTA TCTCATTCTG TTTTTGTATA ACAACCATAT CTAAACATCC AGATTGTTCC   2700

TCTCTATAAC AAGATATAGC CCTATTCATA TGCAGTCCGA TAACTTCATG AAGTATTTTT   2760

ATTTTTGAAA TAATTTTCTT CAAAATTTCA TTATTTTGAA GAATCTGTAG ATTTTTTAAA   2820

ATTTCAACAA TTCTATCCCC AATACGTTCA ATGTCAGTTG ATATTTTTAT TACACTAATA   2880

ATTCTTCTTA AGTCATATGA AACAGGATGT TGTAAACAAA TTAACTCATA TCCTTTTTTA   2940

TCAATATTTA GAACTGACTC ATTTATGATT AAATCTTCTT TAATCAATTC TACTCGTTCT   3000

TCATTTGATA AATATTCAAA TAACTTCTCA TATTTATCAA GCACAGATAC CCAAATGGTC   3060

TCTAAATTAT TTGATAATTC TATAATTTCA TTTTCTAAAT ATAACCTTAA CATTTAGGTA   3120

CCTCTTCTTA ACAAAGTTCG   3140

(2) INFORMATION FOR SEQ ID NO: 159:

1032

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 9048 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

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CCGGATGATT TCCTGGTCAG ATAGGGGGAA AGTGACTTCC TCAGCAATCG CGCGTAGAGT      60

AGGATTCCCT TCACGGATAA TATCGTTCAT ATCAATTAAG TGAGCAGCTT TTGTAATACG     120

TTCTATTGCA GACATTTTCT CTCCTTATAT TATGTTTAGT GCAGTTAGCT ACTGCCAAAG     180

CCCAAGTGGT ATACTTGGAA TAAGCCACTG TGGATTAGTT CATTTTCTTT CATTACCTCT     240

ACATGATATC ACAAAATGAC AAGAATTGAA AGCATTATGG CATTTAGGAT TTATAGAAAA     300

TAGATAGGAA GTTCAATTCA ATTGTGAAAG AAATACTTAT CTGTGATATA ATAAAAAGAA     360

AAGGCTTGCA TAAGAAAGTA GGGAGAACGA AGATACAAAG AAGACAAAAT CGAAATCAGG     420

GTGGTTTAGC TTTTCGTTTT ATGAAGGGCT TGGTAAACTT TTTAGGAGTT ATCGCAAGTG     480

GAGCAATAAG GGATTTGTGG CGATACTCTT GCTAGCAGTT GGTTTATCAA TGGGCTTGGT     540

CTTGTTGTTT GAAAGCTTCC AAGGAATCCC TTGACTAGTC AAAAACGAGA TACTATTTCT     600

CAAGAGGGGA CTAAGCAAAA GTCTCAGGAG TAGGAAGAGG AAAAAACTGC CAGAATTATG     660

GCCCACGGGG ATTTGCTCTA CCACGATGGA CTTTTCTTTT CAGCTAAAAA AGAAGACGGT     720

ACCTATGACT TTCATGAAAA TTTTGAGTAT GTGACTCCTT GGCTCAAGCA AGGGGACTAA     780

GCAGCAGATT TAGCTATTGG TGATTTTGAA GGAACCATTA ATAAGGATCA TTATTTAGCG     840

GGTTATCTTC TCTTTAATGC TCCTGTTGAA GTTATGGATG CTATTAAGGA GGCAGGTTAT     900

CATGTGCTGG ATTTAGCTCA TAATCATATT TTGGATTCGC AAAATTGAGGG AGTTATTTCA     960

ACGGCCGATA TTATTGAGAA AGCTGGAATC ACTCCAATCG GAGTTTATAC GCACGAACCA    1020

CGTGATCAGG CTCCGCTGGT CATTAAGGAA GTGAATGGTA TCAAGGTTGC ATTGTTAGCC    1080

TATTCCTATG GTTTCAATGG AATTGAGCAG TATATTTCTC AGGAAGACTA TAATCGTTAT    1140

CTTTCAGATT TAAACGAAGA TAAGATGAAG GTTGAAATTG AACGGGCAGA GAAGGAAGCA    1200

GATATCACCA TTATCATGCT TCAGATGGGT GTTGAGTATC GATTGGAACC AACTGAAGAA    1260

CAAAAAGCTC TTTATCACAA GATGATCGAT TTGGGAGCGG ATATTATCTT TGGAGGGCAT    1320

CCTCACGTTG TTGAACCATC TGAAACGGTT GAAAAAGATG GAGATAAGAA ACTCATTATC    1380

TATTAAATGG GGAACTTCAT TTCCAATCAA CGAATTGAAT CTATGGGAGA TGAAGAGAAT    1440

GCTAAGTGGA CTGAACGTGG TGTTCTCATG GATGTCACCA TCAAGAAGAA GGATGGAAAA    1500
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1033

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ACAACTATCG GAACAGCTAA AGCTCATCCT ACTTGGGTCA ATCGAACACC AAAGGGAACC    1560

TTTTCACCAG AAGGATATCC CTTGTATCAT TACCAAACTT ATATTTTGGA AGATTTTATA    1620

GAGGATGGCA GTCATCGTGA CCAGTTAGAT GAAGCGACTA AGGAACGAAT TGATACAGCC    1680

TATAAAGAAA TGAATGAACA TGTGGGATTG AAGTGGTATT AGCTTGAATC CAGAGGAAAG    1740

TAAATGATGA TTAAGGTAAT TGCGACAGAT ATGGATGGGA CCTTGCTGGA TGCTAGAGGT    1800

CAGCTTGATC TCCCACGATT GGAAAAGATT TTAGATCAGT TGGATCAAAG GGGCATTCGT    1860

TTTGTCATTG CGACGGGCAA TGAAATTCAC CGCATGAGAC AACTACTGAG TCCCTTGGTG    1920

GATCGAGTGG TTCTGGTTGT TGCTAATGGC GCTCGTATTT TTGAAAACAA TGAATTGATT    1980

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AAAATCCTTG AAAGACTATC TTTACTAAAT AGCTAAATAA TGTTAAATTT GAGCATAATA    3240
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1034

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TCTTGTAAAA AATTCTAAAA TCCTTTAAAA TAAAAAGTGA CGGAGGAATT TATGAATGTA    3300

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TTTTATATTG AAACCCTTGG AATGAAGGCC TTGTTAGAAG AATCGGCCTT TCTGTCACTA    3420

GGTGACCAAA CGGGTCTTGA AAAGCTGGTT TTAGAAGAAG CTCCCAGTAT GCGTACTCGT    3480

AAGGTAGAGG GAAGAAAAAA ACTAGCTAGA TTGATTGTCA-AGGTGGAAAA TCCCTTAGAA    3540

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GACATAGCAA GTCTTCGCCA GAAGTTTGAG TCTACTGAAT ATTTTATTCC TAAGTCTGAA    3960

AAATTCTTCC TTGGTAAAGA TAGAAATAAT GTTGAATTGT GGTTTGAAGA AGTATGAAGT    4020

GGACCAAGAT TATTAAAAAA ATAGAAGAAC AAATCGAGGC AGGGATTTAT CCCGGAGCCT    4080

CTTTTGCGTA TTTTAAGGAC AATCAATGGA CAGAGTTCTA TTTAGGCCAG AGTGACCCAG    4140

AGCATGGCTT GCAGACTGAG GCAGGACTAG TTTATGACCT AGCTAGTGTC AGCAAGGTTG    4200

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TTTACTAACA GTTGTGGCTG GTATTGCTTG GGGGTTGTCA GGAACGAGTG GCCAATACCT    5040
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1035

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AATGGCACAC GGAATTTCGG CTCTGGTCTT GACTAACTTG CGTCTTTTAA TCGCTGGTGG    5100

AATTCTCATG CTCTTGGCTT ATGCTACTGC AAAGGATAAA ATACTGGTCT TTTTAAAGGA    5160

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CGCCTATCTG TCTGCTATTC AGGAGACCAA TGCGGGAACA GCGACGGTGC TTCAGTATGT    5280

TTGTCCTGTC GGAATTTTAA TTTATAGCTG TATCAAGGAT AGGGTGGCAC CGACACTGGG    5340

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TCACTTCATT TCTATCTTTT CTCTATTGTA CCCCAATAAA CTAGAAAAAG TCAAACTTCG    6660

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TTGAGAAAGG AAAAAGATGA GCAACATTTC AACTGATTTG CAAGATGTAG AAAAAATCAT    6780
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1036

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TGTAGGAATT ATTCTATCAG GTGGTCCAAA TTCTGTATAT GAAGATGGTT CATTTGATAT     6960

TGACCCAGAA ATCTTCGAAC TCGGAATTCC AATTTTGGGA ATCTGTTATG GTATGCAGTT     7020

ATTGACCCAT AAACTTGGAG GAAAAGTTGT TCCTGCAGGT GATGCTGGAA ATCGTGAATA     7080

CGGTCAATCA ACCCTAACTC ACACACCATC AGCGCTTTTT GAATCAACAC CTGATGAACA     7140

GACTGTTTTG ATGAGCCATG GTGATGCGGT TACTGAGATT CCTGCTGACT TTGTTCGTAC     7200

AGGTACATCA GCTGACTGCC CATACGCAGC CATCGAAAAC CCAGATAAAC ACATTTACGG     7260

TATCCAATTC CACCCAGAAG TTCGTCATTC TGTATACGGA AATGATATCC TTCGTAACTT     7320

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GATCAAAAAA ATTCGTGAAA CCGTCGGTGA TAAACGTGTC CTTCTTGGTC TATCAGGTGG     7440

TGTTGACTCA TCTGTCGTTG GGGTTCTTCT CCAAAAAGCG ATTGGCGATC AATTGATCTG     7500

TATCTTCGTA GACCACGGTC TTCTTCGTAA AGGCGAAGCT GATCAAGTTA TGGACATGCT     7560

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CGTGGtGGTC TTCCAGAAGA TATGCAGTTT GAATTGATTG AACCACTCAA TACTCTTTAC     7860

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ATGACTGCTG ATTTTGCCAA AATTCCATGG GAAGTACTTC AAAAAAATCTC AGTACGTATC     8220

GTAAATGAAG TGGATCATGT TAACCGTATC GTCTACGATA TTACAAGTAA ACCACCTGCA     8280

ACAGTTGAGT GGGAATAATC GCAAAAAAAT TAAAAGCTTT GTAAAATCAA CGGTTACAGA     8340

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AATAGTTCCA AGTGGTTTAC ATTTGGACAA AAAATTAGAC CGTAGTTTTC AAGCTGCGGT     8460

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CTAAGCTCGA GAAAGGACAA ATTTTGTCCT TTCTTTTTTG ATATTCAGAG CGATAAAAAT     8580
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1037

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CCGTTTTTTG AAGTTTTCAA AGTTCCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT          8640

GAGATTATTG GTCGCTTCCA ATTTGGCGTT AGAATAGTGT AGTTGAAGGG CGTTGACGAT          8700

TTTCTCTTTG TCCTTTAGAA AGGTTTTAAA GACAGTCTGA AAAAGAGGAT GAACCTGCTT          8760

TAGATTGTCC TCAATGAGTC CGAAAAATTT CTCCGGTTCC TTATTCTGAA AGTGAAACAG          8820

CAAGAGTTGA TAGAGCTGAT AGTGATGTTT CAAGTCTTGT GAATAGCTCA AAAGCTTGTT          8880

TAAAATCTCT TTATTGGTTA AATGCATACG AAAAGTAGGG CGATAAAAAT GTTTATCGCT          8940

GAGTTTACGA CTATCCTGTT GTATGAGCTT CCAGTAGCGC TTGATAGCCT TGTATTCATG          9000

AGACTTTCGA TCCAATTGAT TCATGATTTG AACACGCACA CGACTCGG                      9048
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(2) INFORMATION FOR SEQ ID NO: 160:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 10399 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

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GTACCTTTAT TGATGAATGG ACTGTTTAAA TCAGTAGCAC GCCAACCAGA TATGCTTTCT           60

GAGTTTCGTA GTTTGATGTT TTTAGGTGTT GCCTTTATTG AAGGAACTTT CTTTGTAACT          120

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GATGGAAGAA AGTATTAATC CAATCATCTC TATTGGTCCT GTTATCTTCA ATCTGACTAT          240

GTTAGCCATG ACTTTGTTGA TTGTGGGAGT TATTTTTGTC TTTATTTATT GGGCAAGCCG          300

CAATATGACC TTGAAACCCA AAGGAAAGCA AAATGTACTT GAGTATGTCT ATGACTTTGT          360

TATTGGATTT ACAGAACCTA ACATTGGTTC GCGCTACATG AAAGATTACT CACTCTTTTT          420

CCTTTGTTTA TTCCTTTTCA TGGTGATTGC CAATAACCTT GGCTTAATGA CAAAGCTTCA          480

AACGATCGAT GGGACTAACT GGTGGAGTTC GCCAACCGCT AATTTACAGT ATGACTTAAC          540

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AAAAAGTATA AAATCTTTTA TGAGTCCTGT TTTTGTCATA CCGATGAATA TCTTGGAAGA          660

ATTTACAAAC TTCTTATCTT TGGCTTTGCG GATTTTTGGG AATATCTTTG CAGGAGAGGT          720

CATGACGAGT TTGTTACTTC TTCTTTCCCA CCAAGCTATT TATTGGTATC CAGTAGCCTT          780

TGGAGCTAAT TTGGCTTGGA CTGCATTTTC TGTCTTTATT TCCTGCATCC AAGCTTATGT          840

TTTTACTCTT TTGACATCTG TGTATTTAGG GAATAAGATT AATATTGAAG AGGAATAGAA          900
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AGGAGTAACT GATGCACGTA ACAGTAGGTG AATTAATTGG TAATTTTATT TTAATCACTG    960

GCTCTTTTAT TCTTTTGCTA GTCTTGATTA AAAAATTTGC ATGGTCTAAT ATTACAGGCA   1020

TTTTCGAAGA AAGAGCTGAA AAAATTGCTT CAGATATTGA CAGAGCTGAA GAAGCCCGTC   1080

AAAAAGCAGA AGTATTGGCT CAAAAACGCG AAGATGAATT GGCTGGTAGC CGTAAAGAAG   1140

CTAAGACAAT CATTGAAAAT GCAAAGGAAA CAGCTGAGCA AAGTAAGGCT AATATCTTAG   1200

CAGATGCTAA ACTAGAAGCA GGACACTTAA AAGAAAAAGC CAATCAAGAA ATTGCTCAAA   1260

ATAAAGTAGA AGCTTTACAG AGTGTTAAGG GTGAGGTCGC AGATTTGACC ATCAGCTTAG   1320

CTGGTAAAAT CATCTCACAA AACCTTGACA GTCATGCCCA TAAAGCACTC ATTGATCAGT   1380

ATATCGATCA GCTAGGAGAA GCTTAATGGA CAAGAAAACA GTAAAGGTAA TTGAAAAATA   1440

CAGCATGCCT TTTGTCCAAT TGGTACTTGA AAAAGGAGAA GAAGACCGTA TCTTTTCAGA   1500

CTTGACTCAA ATCAAGCAAG TTGTTGAAAA AACAGGTCTG CCTTCTTTTT TAAAACAAGT   1560

GGCAGTAGAC GAGTCGGATA AGGAAAAAAC AATTGCTTTT TTCCAAGATT CTGTGTCGCC   1620

TTTATTACAA AACTTTATCC AGGTTCTGGC CTACAATCAC AGAGCAAATC TTTTTTATGA   1680

TGTGCTTGTA GATTGCTTGA ACCGACTTGA AAAAGAAACA AATCGATTTG AAGTGACGAT   1740

TACGTCTGCT CATCCTCTAA CTGATGAACA GAAGACTCGT TTGCTCCCTT TGATTGAGAA   1800

AAAAATGTCT CTGAAAGTAA GGAGTGTAAA AGAACAAATC GATGAAAGTC TCATTGGTGG   1860

TTTTGTCATT TTTGCCAATC ACAAGACAAT TGATGTGAGT ATTAAACAAC AACTTAAAGT   1920

TGTTAAAGAA AATTTGAAAT AGAAAGTGGT GTTCTTTTGG CAATTAACGC ACAAGAAATC   1980

AGCGCTTTAA TTAAGCAACA AATTGAAAAT TTCAAACCCA ATTTTGATGT GACTGAAACA   2040

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CGCCGTACAG GGAAAATCAT GGAAGTCCCT GTAGGTGAAA GTCTGATTGG TCGTGTTGTG   2280

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GGTGACCGTC AGACAGGGAA AACAACCATT GCGATTGATA CAATCTTGAA CCAAAAAGAT   2520

CAAGATATGA TCTGTATCTA CGTCGCGATT GGACAAAAAG AATCAACAGT TCGTACGCAA   2580

GTAGAAACAC TTCGTCAGTA CGGTGCCTTG GACTACACAA TCGTTGTGAC AGCCTCTGCT   2640

TCACAACCAT CTCCATTGCT CTTCCTAGCT CCTTATGCTG GGGTTGCTAT GGCGGAAGAA   2700
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1039

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TTTATGTATC AAGGTAAGCA TGTTTTGATT GTATACGATG ATCTATCAAA ACAAGCGGTA      2760

GCTTATCGTG AACTGTCGCT CTTGCTTCGT CGTCCTCCAG GTCGTGAAGC CTTCCCAGGG      2820

GATGTTTTCT ATCTCCACAG CCGTTTGCTT GAGCGCTCAG CTAAAGTTTC TGATGAACTT      2880

GGTGGTGGAT CAATTACAGC CCTACCATTT ATCGAGACAC AAGCAGGAGA TATCTCAGCC      2940

TATATCGCAA CCAACGTGAT TTCTATCACT GATGGACAAA TCTTCCTTGG CGATGGCCTC .    3000

TTCAATGCAG GTATTCGTCC AGCCATCGAT GCGGGTTCAT CTGTATCTCG TGTAGGTGGT      3060

TCTGCACAAA TCAAAGCCAT GAAGAAGGTT GCTGGTACAC TTCGTATCGA CCTTGCTTCA      3120

TACCGTGAGT TGGAAGCCTT TACTAAGTTT GGTTCTGACT TGGACGCAGC AACACAGGCT      3180

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CCAGAGATTT TGGAAACCAT TCGTGATACA AAAGACTTGC CAGAAGAAGC AGTCTTGGAT      3420

GCTGCGATTA CAGAGTTTCT CAATCAATCT AGCTTCCAAT AAGAATAGAG GTGTCAGATG      3480

GCAGTATCTC TAAATGATAT TAAAACAAAA ATCGCCTCAA CAAAAAATAC GAGTCAAATC      3540

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ACAGAAATCG TAGCAGGTGC TAGTGCCTTA GAATAGGCTC TAGTCCAGCT CGTATGAAAA      4380

TGAACTTAGG ACCTAGTTGA GCTAGGAACC GACAGTATCT TATATAGAAT AGGAGAAGGA      4440
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                                        1040
     GATGAGTTCA GGTAAAATTG CTCAGGTTAT CGGTCCCGTT GTAGACGTTT TGTTTGCAGC      4500

     AGGGGAAAAA CTTCCTGAGA TTAACAATGC ACTTGTCGTC TACAAAAATG ACGAAAGAAA      4560

     AACAAAAATC GTCCTTGAAG TAGCCTTGGA GTTAGGAGAT GGTATGGTTC GTACTATCGC      4620

     CATGGAATCA ACAGATGGGT TGACTCGTGG AATGGAAGTA TTGGACACAG GTCGTCCAAT      4680

     CTCTGTACCA GTAGGTAAAG AAACTTTGGG ACGTGTCTTC AACGTTTTGG GAGATACCAT      4740

     TGACTTGGAA GCTCCTTTTA CAGAAGACGC AGAGCGTCAG CCAATTCATA AAAAAGCTCC      4800

     AACTTTTGAT GAGTTGTCTA CCTCTTCTGA AATCCTTGAA ACAGGGATCA AGGTTATTGA      4860

     CCTTCTTGCC CCTTACCTTA AAGGTGGTAA AGTTGGACTT TTCGGTGGTG CCGGAGTTGG      4920

     TAAAACTGTC TTAATCCAAG AATTGATTCA CAACATTGCC CAAGAGCACG GTGGTATTTC      4980

     AGTATTTGCT GGTGTTGGGG AACGTACTCG TGAGGGGAAT GACCTTTACT GGGAAATGAA      5040

     AGAATCAGGC GTTATCGAGA AAACAGCCAT GGTCTTTGGT CAGATGAATG AGCCACCAGG      5100

     AGCACGTATG CGTGTTGCCC TTACTGGTTT GACAATCGCT GAATACTTCC GTGATGTGGA      5160

     AGGCCAAGAC GTGCTTCTCT TTATCGATAA TATCTTCCGT TTCACTCAGG CTGGTTCAGA      5220

     AGTATCTGCC CTTTTGGGTC GTATGCCATC AGCCGTTGGT TACCAACCAA CACTTGCTAC      5280

     GGAAATGGGT CAATTGCAAG AACGTATCAC ATCAACCAAG AAGGGTTCTG TAACCTCTAT      5340

     CCAGGCTATC TATGTGCCAG CGGATGACTA TACTGACCCA GCGCCAGCAA CAGCCTTCGC      5400

     TCACTTGGAT TCAACAACAA ACTTGGAACG TAAGTTGGTA CAATTGGGTA TCTACCCAGC      5460

     CGTTGACCCA CTTGCTTCAA GCTCACGTGC CTTGGCACCT GAAATCGTTG GAGAAGAGCA      5520

     CTATGCAGTT GCTGCTGAAG TAAAAACGTGT CCTTCAACGT TACCATGAAT TGCAAGATAT      5580

     CATTGCTATC CTTGGTATGG ATGAGCTTTC TGATGAAGAA AAGACCTTGG TTGCTCGCGC      5640

     CCGTCGTATC CAGTTCTTCT TGTCACAAAA CTTCAACGTT GCGGAACAAT TTACTGGTCA      5700

     GCCAGGTTCT TATGTTCCAG TTGCTGAAAC TGTACGTGGC TTTAAGGAAA TCCTTGATGG      5760

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     TGCAAAAGCT GAAAAAATGG GATTTTAAGA GGTGATCTAT GGCTCAGTTA ACTGTCCAGA      5880

     TCGTGACACC AGATGGTCTC GTCTATGATC ACCATGCCAG CTATGTATCG GTTCGAACTC      5940

     TGGATGGTGA GATGGGGATC TTGCCACGAC ATGAAAATAT GATTGCGGTT TTAGCAGTTG      6000

     ATGAAGTAAA GGTAAAACGT ATCGATGATA AAGATCACGT GAACTGGATT GCAGTAAACG      6060

     GTGGCGTTAT TGAAATTGCC AATGATATGA TCACAATCGT CGCTGACTCT GCAGAACGTG      6120

     CTCGTGATAT CGATATCAGT CGTGCAGAAC GTGCCAAACT TCGTGCAGAA CGTGCAATTG      6180

     AAGAAGCACA AGACAAACAT TTGATTGACC AAGAACGTCG TGCTAAGATT GCTTTGCAAC      6240
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1041

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GGAAGTCGTT GGAGAGTTCT GCTAGACGAC CATTGTCACA ATTACGTTTA AAGACAGTTG        6420

CATTGTCAGA GTCTTGATGG ACAACAATGA GAAATTTTTG GTCGGGTGTC AAATCAAAAT        6480

CACGTGGAGT CTGACCATGC GTTGGAACGA TTTCTAATAA CTCTAAGCTA CCGTCCGCAA        6540

GGATGGTATA TACTGCGATA GAATCATGGC CACGGTTAGA AGCGTAGAGG TATTTACCGT        6600

CTTTAGAGAG ATGAATAGCA GCGGTTCCAT TAAAGCCTTC GTAAGCTTCC GGTAAAGTTG        6660

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GGTCATAGGT GATGACTTGG TCAGTTCCCA AGTCGCAGGT CACTAGATAG TGGTCAGGTG        6900

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AGTGGGGAGC TCCTTCTTCA ACAACATGAT TTAACACAGT CCCGTCAGTT TGATAGGCTG        7140

CAATTCCCCC CTTATCGTCT TGGCTACCAA CAGTGTATAA ATGTTGGTGC TGGTCAAAGG        7200

CAAGGTAGGT TGGACTTGGC TCAGCTGCAA AAAGTTCTAG ATTTGAAAGC TGACCAGTTT        7260

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CCAAATCTGC AACGTCAGGT TTTGACCTTT GCAAGAAACG TTCCTGTTTA CTTAGAAGAT        7860

ATAGATAGGA TTGTTAATGG ATTGGTAGCC CAGCACCTGC CAGATGATTT CAGACCTCAA        7920

TTAGAGCAAG TTTTGACCAA TTTTTCTAGC CAGGCTACAG TTTTGGCAAG TAAGGTTTCA        7980
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1042

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TCTCAGGCAG TCAACTGGGT GAGTGCCTTT ATTAGCGGGG CTTCTCAAGT GATTGTTGCC    8040

TTGATTATCG TTCCTTTCAT GCTCTTTTAT CTCTTGCGTG ATGGGAAAGG CTTGCGTAAC    8100

TATTTGACCC AATTCATTCC AAGAAAATTG AAGGAACCTG TTGGACAAGT TTTATCAGAT    8160

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TGAAGGGATT GGTTTCTATC CTCAGGCCAA GGAAATTTAC CTGAAAATTG TAGAGGATTT    8820

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CTTTAAGCAG CTTGATACCA TTTCTCCTGA CTTTGAAGGC TATGAGTATG GGTACAGTCA    9360

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TCAAGAAATG GACGATTTGG ATACTGCTTA TGAGTATTAT CAAGAGTTGA CAGGAGATTT    9720

GAAGGACAAT CCAGAATTTC TGGAACACTA TATCTATCTC TTGCGTGAAT TGGGACATTT    9780
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1043

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GCAAGAACTG TTTGAGAGAT TGTAAGAATG TTTAACCCAA ATCATTCATA CCTCTCTCAA   9900

CTAGATGTAA CTTACAAAAC CCCTGACCTC ATGAGCCACT TTCTTCCTCC TCATGAGGTC   9960

AGTTTTACTT TCTGCTGTTC CAGTATCGTT TTTCCTCGCT AGATTTCCTC AAAAGGGCAG   10020

ACTCCTCCCT TGGTGCGTCA CACGATTTTT TCATCTCGAC TGTTCTTTAA TGCATCATTA   10080

ACGACGCTTT TCTTCTAGGT GGTTCATAAG GAACAGGAAG ATTCAGGTTG ACTTTTCTAA   10140

TCCTAGAATA AAGTGCTGAA AACAATTCGG AATAGGCATA GAGACTAGAC AATTTGAGGA   10200

GCTGCTTGCG TCCTGTTCGA ACACATTTTC CCACCACGTG AAGAAAAAGA TGGCGGAAGC   10260

GTTTGATTGT TAAAGTTTGG AAGTCACCTC CAGCTAGATG TTTGAGAAAA AGATAGAGAT   10320

TGTAGGCGAT ACAGCTCATC ATCATACGAA TTCGTTTTTG ATTAAGGTTG AACTATCCGT   10380

TTTATCGCCA AAAAATCGG   10399

(2) INFORMATION FOR SEQ ID NO: 161:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 9409 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

GATAAGATTA AGTTAGAAAA GAAAGAACTA GGACATATCT ACCAGATTCA GGTTTTTAAT   60

AGCTATGGGC AGGAAGAAAT CTATCGTGTG ATTTTGATGG AGACCAATAT TAGTTCGGTT   120

TCAACCAATA TCAAGTATGC TGCTGTCTTG ATTAATACCA GTCAGTTGGA ACAGGCTAGT   180

CAAAAGCATG AGCAATTGAT TGTGGTCGTG ATGGCTAGTT TCTGGATTTT GTCTTTACTT   240

GCCAGTCTCT ATCTAGCTAG GGTCAGTGTT AGGCCCCTGC TTGAGAGTAT GCAGAAGCAA   300

CAGTCTTTTG TGGAAAATGC CAGTCATGAG TTACGAACTC CACTCGCAGT TTTGCAAAAT   360

CGCTTAGAGA CCCTTTTTCG TAAGCCAGAA GCTACCATTA TGGATGTGAG CGAAAGCATT   420

GCATCGAGTT TGGAAGAAGT CCGAAATATG CGTTTTTTAA CGACAAGCTT GCTGAACTTA   480

GCTCGGAGAG ATGATGGGAT TAAGCCGGAG CTTGCAGAAG TTCCAACTAG CTTTTTTAAT   540

ACAACTTTCA CAAACTACGA GATGATTGCT TCGGAAAATA ATCGTGTCTT CCGTTTTGAA   600

AATCGTATCC ATCGAACAAT TGTCACAGAT CAGCTTCTTC TGAAACAACT GATGACCATT   660

CTTTTCGATA ATGCCGTCAA GTATACTGAG GAGGATGGTG AAATTGATTT TCTTATCTCG   720

1044

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GCGACCGATC GCAATCTTTA TTTACTTGTT TCTGATAATG GAATCGGTAT TTCGACAGAA        780

GATAAAAAGA AAATTTTTGA CCGTTTTTAT CGAGTAGACA AGGCTAGAAC CCGGCAAAAA        840

GGTGGTTTTG GTTTAGGATT ATCCCTAGCC AAGCAAATTG TAGATGCTCT AAAAGGAACT        900

GTTACTGTCA AAGATAATAA ACCCAAGGGA ACAATCTTTG AAGTGAAGAT TGCCATTCAG        960

ACACCATCTA AAAAGAAAAA ATAAAAATAT CGCTCCAATT GGGGCGATAT TTTGGATTTA       1020

TCTTCTACGT TTTCGTTTGA TAATAGACCG TTGAACTTTT AAAACAAGTA AGCTGAATCC       1080

GATTGCTGCG GCAAAGGCAA GAGCAGTTGA TAATTTTAAT GCTAAAAAGA TAAAACTAAA       1140

GATAGCAATA CAGATACAAA AAACAGCGAT ATTAATAAAA AATAGGATTT CCTTGAGATT       1200

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TTCTTGATAG TCTACCTCAT AGGATTGTAA TTTTCTTACG GGCATGATTC TCTCCTTAAC       1320

AGTACATACC TATTTTATCA TTTTTTTCGGC AGAGAATTAT TACAGAAAGG TTACAAAAAG       1380

AATAAAGTCC CTTTTCATTT TCAAAGCATG GCTGATTTTG GAGAAATGTG GTATAATTTT       1440

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GGCTGAGCCA AGTGATCCAG AGAGCCACTA TTCCATTTTT GAAGATAATC ATGGGACCCA       2100

TATCTTTGCC AACAATGACC TTGATTTGAT GATCAAATTA ACAGAATTGG TGGAGCATGG       2160

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ATTTTATGAC TACGATCCTG ACATGGTTAG ATAAAATACA TGATTCGTTG AGAGAAGGAA       2400

GATGCAAACA TTTCTTCTCT CAATTTTTCG TATTTCTTCA CTATTTTACA AAAATCAGCA       2460

GGCTAGAATG CTCTATTCGA TGGGATTTTT AAGAAAAGTA GTGTTCTTGA GTTTGAAAAT       2520
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1045

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CGATTGGTAA TCGCTATGTT GTGGTGGATT TAGAGGCAAC TAGCACAGGT AGTAAGGCTA          2640

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CGGATGTCAA TCCACATGAA CCCTTGGATG CTCATATCAA AGAACTGACA GGATTGACAG          2760

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TGGAGGATGG GATTTTTGTA GCCCATAATG TTCAGTTTGA TGCTAATCTC TTGGCGGAAA          2880

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AACCTGTCTC TCTGATTCAA GCGCCGACAG GGATTGGGAA AACCTATGGC TATCTCTTAC          3420

CCGCTTTATC TCAATCCAAA GAGCGACAAA TTGTTCTTAG TGTTCCGACA AAGATTCTTC          3480

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CTAGGAAAAA TATCTTAGAT TCTCTGGACA ATCTCCATCA GTATTTTTCA GAATTGGAAG          4140

TAGAAGACTT TGATGAGCTG GTTCGCTATT TTACAGCTGA AGGTGATTAC TGGCTTGAAG          4200

TAACTGAAAC GAGTCAAAAG AAAATTCAGA TTTCTTCTAC AAAATCAGGC CGTACTCTTC          4260
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1046

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TGTCCTCTTT ACTTCCTGAG AGTTGCCAAG TCTTGGGAGT ATCGGCTACT CTTGAGATTA       4320

GTCAGAGGGT TTCTTTGGCA GACCTTTTAG GCTATCCTGA AGCTAAATTT GTCAAGATTG       4380

AATCTCGGGG AAAACAGGAA CAAGAAGTGG TCATGGTCAA AGATTTCCCT CTGGTAACAG       4440

AAACCTCCTT AGAAGTCTAT GCCAGAGAGG TAGCTGCTTT ACTAGTGGAA ATTCAAGCTT       4500

TCCAGCAACC GATTTTGGTT CTCTTTACCG CTAAAGACAT GCTTCTAGCA GTATCGGATT       4560

TACTTACAGT TAGCCACTTG GCCCAGTATA AAAATGGGGA TGTTCATCAG CTAAAGAAAC       4620

GCTTTGAAAA AGGTGAACAA CAAATCTTGC TTGGTGCAGC AAGTTTCTGG GAGGGAGTTG       4680

ATTTTTCAAG CCATCCTTCT GTGATTCAAG TTGTACCGAG GCTTCCTTTC CAAAATCCTC       4740

AAGAACCCTT GACGAAAAAG ATTAATCAAG AACTGAATCA AGAAGGGAAA AATGCCTTTT       4800

ATGATTATCA ATTGCCAATG GCCATTATTC GTTTAAAACA GGCTTTGGGA AGAAGTATGA       4860

GACGTGAATA CCAACGTTCC TTAACTCTTA TTTTGGATAG GAGAATCGTC GGAAAACGAT       4920

ACGGCAAACA AATAGTAGCA TCTCTAGCAG AAGAAGCGAC TGTTAAAACC ATCTCTCGAT       4980

CCGAAGTTGA CGAGGCTATT GATAGATTTT TTAATGAGCT TTGATAAATA GTATTGTATG       5040

AAAGTATAAG GTTAGTATAT ATGAAACGTT CTCTCGACTC AAGAGTCGAT TACAGTTTGC       5100

TCTTGCCAGT ATTTTTTCTA CTGGTCATCG GTGTGGTGGC TATCTATATA GCCGTTAGTC       5160

ATGATTATCC CAATAATATT CTGCCCATTT TAGGGCAGCA GGTCGCCTGG ATTGCCTTGG       5220

GGCTTGTGAT TGGTTTTGTG GTCATGCTCT TTAATACAGA ATTTCTTTGG AAGGTGACCC       5280

CCTTTCTATA TATTTTAGGC TTGGGACTTA TGATCTTGCC GATTGTATTT TATAATCCAA       5340

GCTTAGTTGC ATCAACGGGT GCCAAAAACT GGGTATCAAT AAATGGAATT ACCCTATTCC       5400

AACCGTCAGA ATTTATGAAG ATATCCTATA TCCTCATGTT GGCTCGTGTC ATTGTCCAAT       5460

TTACAAAGAA ACATAAGGAA TGGAGACGCA CGGTTCCGCT GGACTTTTTG TTAATTTTCT       5520

GGATGATTCT CTTTACCATT CCAGTCCTAG TTCTTTTAGC ACTTCAAAGT GACTTGGGGA       5580

CGGCTTTGGT TTTTGTAGCC ATTTTCTCAG GAATCGTTTT ATTATCAGGG GTTTCTTGGA       5640

AAATTATTAT CCCAGTATTT GTGACTGCTG TAACAGGAGT TGCTGGTTTC TTAGCTATCT       5700

TTATTAGCAA GGACGGACGA GCTTTTCTTC ACCAGATTGG AATGCCGACC TACCAAATTA       5760

ATCGGATTTT GGCTTGGCTC AATCCCTTTG AGTTTGCCCA AACAACGACT TACCAGCAGG       5820

CTCAAGGGCA GATTGCCATT GGGAGTGGTG GCTTATTTGG TCAGGGATTT AATGCTTCGA       5880

ATCTGCTTAT CCCAGTTCGA GAGTCAGATA TGATTTTTAC GGTTATTGCA GAAGATTTTG       5940

GCTTTATTGG CTCTGTCCTG GTTATTGCCC TCTATCTCAT GTTGATTTAC CGTATGTTGA       6000

AGATTACTCT TAAATCAAAT AACCAGTTCT ACACTTATAT TTCCACAGGT TTGATTATGA       6060
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1047

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TGTTGCTCTT CCACATCTTT GAGAATATCG GTGCTGTGAC TGGACTACTT CCTTTGACGG      6120

GGATTCCCTT GCCTTTCATT TCGCAAGGGG GATCAGCTAT TATCAGTAAT CTGATTGGTG      6180

TTGGTTTGCT TTTATCGATG AGTTACCAGA CTAATCTAGC TGAAGAAAAG AGCGGAAAAG      6240

TCCCATTCAA ACGGAAAAAG GTTGTATTAA AACAAATTAA ATAAGGAGAA AATCATGGTA      6300

AAAGTAGCAG TTATATTAGC TCAGGGCTTT GAAGAAATTG AAGCCTTGAC AGTTGTAGAT      6360

GTCTTGCGTC GAGCCAATAT CACATGTGAT ATGGTTGGTT TTGAAGAGCA AGTAACGGGT      6420

TCGCATGCAA TCCAAGTAAG AGCAGATCAT GTCTTTGATG GAGATTTATC AGACTATGAT      6480

ATGATTGTTC TTCCTGGAGG TATGCCTGGT TCTGCACATT TACGTGATAA TCAGACCTTG      6540

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CCAATTGCCC TCAATCAAGC AGAGATATTG AAAAATAAGC GATACACTTG TTATGACGGC      6660

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TTGACAACCA GTCGGGGTCC TTCAACAGCC CTTGCCTTTG CCTACGAGTT GGTGGAGCAA      6780

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GCACTGTATG GTATCACACA AGACCATGAC AGTGTCTATC AAGCTTTAAA GGTTTCTACT      7080

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GGCTTTAAGA GAAAGCCAAA TCCCGAATCC ATGCTTTATT TAAGAGAAAA GTATCAGATT      7380

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AAATTCAAGT TTTAGAGGGC TTAGAGGCTG TTCGTATGCG TCCAGGGATG TACATTGGAT      7620

CAACCTCAAA AGAAGGTCTT CACCATCTAG TCTGGGAAAT TGTTGATAAC TCAATTGACG      7680

AGGCCTTGGC AGGATTTGCC AGCCATATTC AAGTTTTTAT TGAGCCAGAT GATTCGATTA      7740

CTGTTGTGGA TGATGGGCGT GGTATCCCAG TCGATATTCA GGAAAAAACA GGCCGTCCTG      7800
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1048

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CTGTTGAGAC CGTCTTTACA GTCCTTCACG CTGGAGGAAA GTTCGGCGGT GGTGGATACA    7860

AGGTTTCAGG TGGTCTTCAC GGGGTGGGGT CGTCAGTAGT TAATGCCCTT TCCACTCAAT    7920

TAGACGTTCA TGTTCACAAA AATGGTAAGA TTCATTACCA AGAATACCGT CGTGGTCATG    7980

TTGTCGCAGA TCTTGAAATA GTTGGAGATA CGGATAAAAC AGGAACAACT GTTCACTTCA    8040

CACCGGACCC AAAAATCTTC ACTGAAACAA CAATCTTTGA TTTTGATAAA TTAAATAAAC    8100

GGATTCAAGA GTTGGCCTTT CTAAATCGCG GTCTTCAAAT TTCAATTACA GATAAGCGCC  · 8160

AAGGTTTGGA ACAAACCAAG CATTATCATT ATGAAGGTGG GATTGCTAGT TACGTTGAAT    8220

ATATCAACGA GAACAAGGAT GTAATCTTTG ATACACCAAT CTATACAGAC GGTGAGATGG    8280

ATGATATCAC AGTTGAGGTA GCCATGCAGT ACACAACTGG TTACCATGAA AATGTCATGA    8340

GTTTCGCCAA TAATATTCAT ACCCATGAAG GTGGAACACA TGAACAAGGT TTCCGTACAG    8400

CCTTGACACG TGTTATCAAC GATTATGCTC GTAAAAATAA GTTACTGAAA GACAATGAAG    8460

ATAATTTAAC AGGGGAAGAT GTTCGCGAAG GCTTAACTGC AGTTATCTCA GTTAAACACC    8520

CAAATCCACA GTTTGAAGGA CAAACCAAGA CCAAATTGGG AAATAGCGAA GTGGTCAAGA    8580

TTACCAATCG CCTCTTCAGT GAAGCTTTCT CCGATTTCCT CATGGAAAAT CCACAGATTG    8640

CCAAACGTAT CGTAGAAAAA GGAATTTTGG CTGCCAAGGC TCGTGTGGCT GCCAAGCGTG    8700

CGCGTGAAGT CACACGTAAA AAATCTGGTT TGGAAATTTC CAACCTTCCA GGGAAACTAG    8760

CAGACTGTTC TTCTAATAAC CCTGCTGAAA CAGAACTCTT CATCGTCGAA GGAGACTCAG    8820

CTGGTGGATC AGCCAAATCT GGTCGTAACC GTGAGTTTCA GGCTATCCTT CCAATTCGCG    8880

GTAAGATTTT GAACGTTGAA AAAGCAAGTA TGGATAAGAT TCTAGCCAAC GAAGAAATTC    8940

GTAGTCTTTT CACAGCCATG GGAACAGGAT TTGGCGCAGA ATTTGATGTT TCGAAAGCCC    9000

GTTACCAAAA ACTCGTTTTG ATGACCGATG CCGATGTCGA TGGAGCCCAC ATTCGTACCC    9060

TTCTTTTAAC CTTGATTTAT CGTTATATGA AACCAATCCT AGAAGCTGGT TATGTTTATA    9120

TTGCCCAACC ACCAATCTAT GGTGTCAAGG TTGGAAGCGA GATTAAAGAA TATATCCAGC    9180

CGGGTGCAGA TCAAGAAATC AAACTCCAAG AAGCTTTAGC CCGTTATAGT GAAGGTCGTA    9240

CCAAACCGAC TATTCAGCGT TATAAGGGGC TAGGTGAAAT GGACGATCAT CAGCTGTGGG    9300

AAACAACCAT GGATCCCGAA CATCGCTTGA TGGCTAGAGT TTCTGTAGAT GATGTGCAGA    9360

AGCAGATAAA ATCTTTGATA TGTTGATGGG GATCGAGTTG TCCTCGTCG              9409
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(2)· INFORMATION FOR SEQ ID NO: 162:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6415 base pairs
        (B) TYPE: nucleic acid

1049

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

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CCTGGGAAAG TCTTGAAAAT TATGATAGAA TGGTGGAAGG AAAAATTCAG GAGAGTAGTA      60

GTGACTCAAA ATGTTGAAAG TCTTCTCGTA TCCATTGTAA TCAGTGCATA CAATGAAGAA     120

AAATATCTGC CTGGTCTAAT TGAAGACTTA AAAAATCAAA CCTATCCTAA AGAGGATATT     180

GAAATTCTAT TTATAAATGC TATGTCCACA GATGGGACCA CAGCTATCAT TCAGCAATTT     240

ATAAAGGAAG ATACAGAGTT TAACTCAATT AGATTGTATA ACAATCCTAA GAAAAATCAA     300

GCTAGTGGTT TTAACCTGGG AGTTAAACAT TCTGTAGGGG ACCTTATTTT AAAAATTGAT     360

GCTCATTCAA AAGTTACTGA GACTTTTGTA ATGAACAATG TGGCTATTAT TCAACAAGGT     420

GAATTTGTCT GTGGGGGGCC TAGACCGACG ATTGTCGAAG GAAAAGGAAA ATGGGCAGAG     480

ACCTTGCATC TTGTTGAGGA AAATATGTTT GGCAGTAGCA TTGCCAATTA TCGAAATAGT     540

TCTGAGGATA GATATGTTTC TTCTATTTTT CATGGAATGT ATAAACGAGA GGTTTTCCAG     600

AAGGTTGGTT TAGTAAATGA GCAACTTGGC CGAACTGAAG ATAATGATAT TCATTATAGA     660

ATTCGAGAAT ATGGTTATAA AATCCGCTAT AGCCCAAGTA TTCTATCTTA TCAGTATATT     720

CGACCAACAT TCAAGAAAAT GCTGCATCAA AAGTATTCAA ATGGTTTGTG GATTGGCTTG     780

ACAAGTCATG TTCAGTTTAA GTGTTTATCA TTATTTCACT ATGTTCCTTG TTTATTTGTT     840

TTGAGTCTTG TGTTTAGTCT AGCATTGTTA CCGATCACAT TCGTATTCAT AACTTTACTA     900

TTAGGTGCCT ATTTTCTACT TTTGTCATTA CTCACTTTGC TGACTTTATT AAAACATAAA     960

AATGGATTTC TAATTGTGAT GCCCTTTATT TTATTTTCCA TTCACTTTGC TTATGGCCTT    1020

GGGACGATTG TAGGTTTAAT TAGAGGATTT AAATGGAAGA AGGAGTACAA GAGAACAATA    1080

ATTTATTTGG ATAAAATAAG CCAAATAAAT CAAAATATGC TATAATAACA ATATAGTAAA    1140

ACTCTTTTAA GGAGGAGTAG ATTTCTATGA ATAAAAAACT AACAGATTAT GTGATTGATC    1200

TGGTGGAAAT TTTAAATAAA CAACAAAAGC AGGTTTTCTG GGGAATATTT GATATTTTCA    1260

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CTGTTGACTA CATTATCTAT ACGAGTTTGG CCTTCCTGTT CTATCAATTG ATGATTGGTT    1380

TTTGGGGGTT GAACGCGAGC ATTAGTCGTT ACAGCAAGAT TACGGATTTC ATGAAAATCT    1440

TTTTTGGTGT GACTGCTAGC AGTGTCTTGT CATATAGTAT CTGTTATGCC TTCTTGCCAC    1500

TCTTCTCCAT CCGTTTCATC ATTCTCTTTA TCTTGTTGAG TACCTTCTTG ATTTTATTGC    1560
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                                          1050
CACGGATTAC TTGGCAGTTA ATCTACTCCA GACGCAAAAA AGGTAGTGGT GATGGAGAAC    1620

ACCGTCGGAC CTTCTTGATT GGTGCCGGTG ATGGTGGGGC TCTTTTTATG GATAGTTACC    1680

AACATCCAAC CAGTGAATTA GAACTGGTCG GTATTTTGGA TAAGGATTCT AAGAAAAAGG    1740

GTCAAAAACT TGGTGGTATT CCTGTTTTGG GCTCTTATGA CAATCTGCCT GAATTAGCCA    1800

AACGCCATCA AATCGAGCGT GTCATCGTTG CGATTCCGTC GCTGGATCCG TCAGAATATG    1860

AGCGTATCTT GCAGATGTGT AATAAGCTGG GTGTCAAATG TTACAAGATG CCTAAGGTTG    1920

AAACTGTTGT TCAGGGCCTT CACCAAGCAG GTACTGGCTT CCAAAAAATT GATATTACGG    1980

ACCTTTTGGG TCGTCAGGAA ATCCGTCTTG ACGAATCGCG TCTGGGTGCA GAACTGACAG    2040

GTAAGACCAT CTTAGTCACA GGAGCTGGAG GTTCAATCGG TTCTGAAATC TGTCGTCAAG    2100

TTAGTCGCTT CAATCCTGAA CGCATTGTCT TGCTCGGTCA TGGGGAAAAC TCAATCTACC    2160

TTGTTTATCA TGAATTGATT CGTAAGTTCC AAGGGATTGA TTATGTACCT GTGATTGCGG    2220

ACATTCAAGA CTATGATCGT TTGTTGCAAG TCTTTGAGCA GTACAAACCT GCTATTGTTT    2280

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AGATGGTTAT GATTTCGACA GATAAGGCAG TCAATCCACC AAATGTTATG GGAGCAACCA    2460

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AGTTCCGCAC TCTCAGTGGA GATGAGTTGA AGCAAGCTAT TATCGCCTTT GCTAATCAAA    3000

CAACCCACAT TGAATAAAAA AGAAAAACGC ATAGTATCAA GTTACACAAC CTTGGTAATA    3060

TGCGTTTTAT TATGTAGAGA CTTATACTCT TCGAAAATCT CTTCAAACCA CGTCAACGTC    3120

GCCTTGCCGT ATATGGTTAC TGACTtCGTC AGTTCTATCC ACAACCTCAA AACAGTGTTT    3180

TGAGytGACT TCGTCAGTTC TATCCACAAC CTCAAAACAG TGTTTTGAGc TGACtTCGTC    3240

AGTTCTATCC ACAACCTCAA AACAGTGTTT TGAGCTGAcT TCGTCAGTTC CATCCACAAC    3300

CTTAAAACAG TGTTTTGAGy TGACnTTCGT CAGTTCCATC TACAACCTTA AAACAGTGTT    3360
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1051

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TTGAGCTGCC CGCAGCTAGT TTCCTAGTTT GCTCTTTGAT TTTCATTGAG TATTACTTCA    3420

TTTTCTTCTG AAATGGAATT GTTACCCAGT CTATGCTATT GAAAATACGC CAAAACTTCT    3480

AAGGGTTTGT GAGCGATATA ATCAGGTTGA TAGTTTAGTA GATCTGCTTG CTCTCCAAAT    3540

CCCCAAGTGA TGGCCAATTT CTGAATACCT GTTTCTCGAG CTCCCAGCAT ATCAAACTTG    3600

GTATCTCCGA TGATGATGGC TTGTTCTGGT GCTAGTTGAT GTGTCTGCAA GGCTTGGTGA    3660

ATGACATCTG CCTTATGGGG TGCTTCAGGG CTAGAACCAT AAATGCCATC AAAGAAATGA    3720

TGGATTTCCA AGTTTTTTGC CATGTCTTGA GCAGTAGATG TATCCTTTGT CGTGGTGATG    3780

TAGAGTGGAT AACTGCTCGA TAACTCCTCA AGCAAGTCTA TAATCTGAGG AAAGAGTTGA    3840

GCTTCATAGA TGCCTTTTGC CTTATAGTAA GAACGATATA TCTGCACGGC TTCAGAAATT    3900

TGGTCTTTGG ACAGGCAGGT CGCAAAACTA CTTTCGAGAG GTGGTCCCAT AAAACCACGA    3960

ATAGTTTTGG CATCAGGGCT AGGCACCCCC AGCTCTTTAA AGGTATAGGT AAAGGCATTG    4020

TGAATCCCGA TAGAACTATC AACGAGGGTT CCATCCAAAT CGAAAAAAAT CGCTGTGATA    4080

GAGGTCATGG TTTCTCCTAT TTGATAAGCT TATTCTCCGA AAATTTCTTT TTGGAGGCGA    4140

CGACCAGTAG GGGTGGTAGC GAGTCCACCT TCAGCTGTTT CACGAAAGGC AGTTGGCATG    4200

CTTGCTCCTA CTTGGTACAT GGCATCGATC ACTTCATCCA CAGGGATTTT AGATTCGATA    4260

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GCGACATTTC CTTGAAAGTC CAGATCTGCT TGCTCGACCA ATTCTTTGAT AGAATAAAAC    4980

ATGCTTCCTC CTATTTAAAG AAATTGACAT TGTGGAGATG AGGGATTTTT CGAATTTCTT    5040

CGATAGCCTC ATCACAGTTG CGACTGTCAA CTTCGATAAT CATAATGGCT TTTTCACCAG    5100
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1052

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CTTTTTCACG AGTGACATTC ATCTGGGCGA TATTGATACC ATAGCGGGAA AGCGCCTCTG    5160

TAACAAGGGC AATCATACCT GGAATATCTT GATGAACGAT GATGATAGTC GGTGTATTCA    5220

TATTGAGAGA GACGGCAAAA CCATTGAGTT CGGTTACCTG AATATTTCCT CCACCGATAG    5280

AAATACCAGT CACGCTGATG GTCTTGTGGG CATTTTTAAC AGTAATTTTA GTGGTGTTAG    5340

GGTGAGGGGC ATTGCTGTCT TTCTGAATGG TCCAGACAAT CTTGATACCA CGCTTGTGGG    5400

CAATTTCCAG ACTATTTGGA ATTTCAGGAT CATCTGTATC CATTCCTAAA ATACCTGCAA    5460

CAAGGGCTAG GTCTGTTCCG TGACCACGAT AGGTCTTGGC AAATGAGTTA AAAAGTTGGA    5520

ATTCAACTTC TGTCGGAGTA TCATCAAAAA TGGAAGAGAC AATCTTCCCA ATACGAACAG    5580

CACCAGCGGT ATGGCTACTA GATGGGCCAA TCATAACTGG TCCGATGATA TCAAAGACAG    5640

ATTGAAAACG AAGTGATTTC ATCAGTTTCC CCTTATAAAA ATTCTTATCT CTATTATATC.   5700

AAAGAATGAG GGGCTTGGCT TTAATTGTGG ATGAAAACCT TTCTAATACC TCAAATAGCA    5760

TAAAAATAGT ATCTTTTATG ACAAAAAACA CCTTATTTAG GGAAATAAAA AATAATTTTG    5820

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AGAAAGAAGG AGAATTTTCG AATATGAAAT CAATAACTAA AAAGATTAAA GCAACTCTTG    5940

CAGGAGTAGC TGCCTTGTTT GCAGTATTTG CTCCATCATT TGTATCTGCT CAAGAATCAT    6000

CAACTTACAC TGTTAAAGAA GGTGATACAC TTTCAGAAAT CGCTGAAACT CACAACACAA    6060

CAGTTGAAAA ATTGGCAGAA AACAACCACA TTGATAACAT TCATTTGATT TATGTTGATC    6120

AAGAGTTGGT TATCGATGGC CCTGTAGCGC CTGTTGCAAC ACCAGCGCCA GCTACTTATG    6180

CGGCACCAGC CGCTCAAGAT GAAACTGTTT CAGCTCCAGT AGCAGAAACT CCAGTAGTAA    6240

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AAAAAGAATC AGGTGGTAGT ATACAGCTAC AAATGGACGT TATATCGGAC GTTACCAATT    6360

AACAGATTCA TACCTGAACG GTGACTACTC AGCTGAAAAC CAAGAACGGG TACCG         6415
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(2) INFORMATION FOR SEQ ID NO: 163:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8494 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

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TACCCCTTTC GAATTTTGGC AAAAATTCGG TAAGGCTTTG ATGGTAGTTA TCGCGGTTAT    60

GCCGGCTGCT GGTTTGATGA TTTCAATCGG TAAGTCTATC GTGATGATTA ACCCAACCTT    120
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1053

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TGCACCACTT GTCATCACAG GTGGAATTCT TGAGCAAATC GGTTGGGGGG TTATCGGTAA    180
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CCTTCACATT TTGTTTGCCC TAGCCATTGG AGGAAGCTGG GCTAAAGAAC GTGCTGGTGG    240

TGCTTTCGCC GCTGGTCTTG CCTTCATCTT GATTAACCGT ATCACTGGTA CAATCTTTGG    300

TGTATCAGGC GATATGTTGA AAAATCCAGA TGCTATGGTA ACTACTTTCT TTGGTGGTTC    360

AATCAAAGTT GCTGATTACT TTATCAGTGT TCTTGAAGCT CCAGCCTTGA ACATGGGGGT    420

ATTCGTAGGG ATTATCTCAG GTTTTGTAGG GGCAACTGCT TACAACAAAT ACTACAACTT    480

CCGTAAACTT CCTGATGCAC TTTCATTCTT CAACGGGAAA CGTTTCGTAC CATTTGTAGT    540

TATTCTTCGT TCAGCAATCG CTGCAATTCT ACTTGCTGCT TTCTGGCCAG TAGTTCAAAC    600

AGGTATCAAT AACTTCGGTA TCTGGATTGC CAACTCACAA GAAACTGCTC CAATTCTTGC    660

ACCATTCTTG TATGGTACTT TGGAACGTTT GCTCTTGCCA TTTGGTCTTC ACCACATGTT    720

GACTATCCCA ATGAACTACA CAGCTCTTGG TGGTACTTAT GACATTTTAA CTGGTGCAGC    780

TAAAGGTACT CAAGTATTCG GTCAAGACCC ACTATGGCTT GCATGGGTAA CAGACCTTGT    840

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TATCTACCGT AATGTTGATG CTGACAAGAA ACATAAATAC AAAGGTATGA TGATTGCAAC    1020

AGCTCTTGCA ACATTCTTGA CAGGGGTTAC TGAACCAATC GAATACATGT TCATGTTCAT    1080

CGCAACACCT ATGTATCTTG TTTACTCACT TGTTCAAGGT GCTGCCTTCG CTATGGCTGA    1140

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CACTGTTCAc TTCAAAGATC TTACTGAGGA AGTTTACTCA GTAGCAGACG GTCAAGTTGT    1740

TGCTTTGGAA CAAGTAAAGG ATCCAGTATT TGCTCAAAAA ATGATGGGTG ATGGATTTGC    1800

AGTAGAACCT GCAAATGGAA ACATTGTATC TCCAGTTTCA GGTACTGTGT CAAGCATCTT    1860
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                                          1054
CCCAACAAAA CATGCTTTTG GTATTGTGAC GGAAGCAGGT CTTGAAGTAT TGGTTCACAT   1920

TGGTTTGGAC ACAGTAAGTC TTGAAGGTAA ACCATTTACA GTTCATGTTG CTGAAGGACA   1980

AAAAGTTGCA GCAGGAGATC TCCTTGTCAC AGCTGACTTG GATGCTATCC GTGCAGCAGG   2040

ACGTGAAACT TCAACAGTAG TTGTCTTCAC AAATGGTGAT GCAATTAAAT CAGTTAAGTT   2100

AGAAAAAACA GGTTCTCTTG CAGCTAAAAC AGCAGTTGCT AAAGTAGAAT TGTAATATAC   2160

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CTCGTCAGAG GTGGAGGTTA ATGACCTTTA TCAAGCTTTG CCAGCAGCTG AGCCTATTCA   2400

CCAAGACCAT TATGTTAGAC TCTTGGTTGA AAAGTTGTCT GAGCAAGGGA AAAATTACTA   2460

CTGGACCTGG GCCTATAACC ATATCGGCTA TAACCGCTAC CACGAAGGTG TGGCTATCTT   2520

GTCTAAAACA CCTATTGAAG CCAGAGAAAT TTTGGTTTCA GATGTGGATG ATCCAACAGA   2580

CTATCATACT CGCCGTGTTG CCCTAGCTGA AACTGTAGTC GATGGCAAGG AGCTAGCAGT   2640

TGCCAGTGTT CATCTCTCTT GGTGGGATAA AGGTTTCCAA GAAGAATGGG CACGATTTGA   2700

GGCTGTCTTG AAAAAATTGA ACAAGCCACT TTTACTAGCT GGAGATTTCA ACAATCCGGC   2760

TGGACAGGAA GGTTACCAAG CTATTTTAGC TAGTCCATTA GGCTTACAAG ACGCATTTGA   2820

AGTTGCTCAA GAGAAAAGTG GTAGCTATAC TGTTCCGCCT GAAATTGATG GCTGGAAAGG   2880

GAACACTGAA CCCCTTCGAA TCGATTATGT CTTTACTACC AAAGAGTTAG CGGTGGAAAA   2940

TTTACATGTC GTATTTGATG GTAACAAGAG TCCACAAGTG AGTGATCACT ATGGCTTGAA   3000

TGCTATATTA AACTGGAAAT AATAACTGAA AAGAGGTTGG AACTATAAAA TTCCAGCCTT   3060

TTCTTACTAG AGAAGCTACT GGAAATAGCC TAAATAAGTG AGACTACTGT AATGGAATAA   3120

AATATGGTAT AATTGATAAG GTAGATAGAA TCGAGGATGT TATGTCATTT ACGAAATTTC   3180

AATTTAAAAA CTATATTAGA GAAGCCTTGA AGGAGTTAAA ATTTACAACT CCAACAGAℶG   3240

TGCAAGACAA GTTGATTCCT ATTGTTTTGG CAGGTCGTGA CCTAGTAGGA GAATCAAAAA   3300

CAGGTTCAGG TAAGACTCAT ACTTTCTTGT TACCGATTTT CCAGCAATTA GATGAAGCTA   3360

GCGATAGTGT ACAAGCAGTG ATTACTGCAC CGAGTCGTGA GTTGGCTACT CAAATTTACC   3420

AAGTAGCGCG TCAGATTTCA GCTCACTCAG ATGTCGAAGT TCGTGTGGTT AATTATGTGG   3480

GTGGTACGGA TAAGGCTCGC CAGATTGAGA AATTGGCAAG CAATCAGCCT CATATTGTTA   3540

TTGGAACACC AGGCCGTATC TACGACTTGG TTAAATCTGG TGATTTAGCT ATTCATAAAG   3600

CCAAGACATT TGTTGTTGAT GAAGCAGATA TGACCTTGGA TATGGGATTC TTGGAAACTG   3660

1055

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TGAAGGTTGC AAAAATCCAT GGCGATATTG CCCCTCGTGA ACGCAAGCGA ATCATGAATC       4020

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ACATTGAAGG TGTCAGCCAT GTCATCAATG ATGCCATTCC GCAAGACTTA TCTTTTTTTG       4140

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GACCGTCCGG TACGTGTAGA TACAGTCGTT ATTTCTACTC AGCATGATCC AGAGGCCACT       5340

AATGAACAAA TCCATCAAGA TGTGATTGAC AAGGTCATCA AAGAAGTTAT TCCATCTTCT       5400
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1056

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